



**Government of Bengal**

**Department of Agriculture and Industries**

**New Avenues of  
Employment for Bengali  
Youths**

**(BEING VOLUME II OF THE HANDBOOK ON AVENUE  
EMPLOYMENT)**

**Industries, Trades, Professions, Miscellaneous  
Organisations and**

# INTRODUCTION.

## Preliminary note.

The present volume on New Avenues of Employment in Bengal is a sequel to the first volume published in 1939. The first volume gave details of opportunities of employment in the Imperial and Superior Central Services, in the Army, Navy and Air Force, in the various miscellaneous departments under the Government of India, in the Services under the control of the Government of Bengal, and in the Railways, Tramway Companies, Port Trusts and Local Authorities in Bengal. The present volume covers facts and figures in the various industries and trades of Bengal and also in a few non-official public organisations. In all, 27 industries, 11 trades and professions and 5 non-official public organisations have been covered in this Handbook. There is also a separate section on agriculture and farming as a profession.

## An explanation.

For the last few years, the feeling has grown that in Bengal men of this province do not have their due share of employment in the various mills, factories and mercantile offices. It has been frequently asserted that most of the jobs go to non-Bengalis and that Bengalis do not get a chance because they do not even know what jobs are available, what the minimum qualifications prescribed for such jobs are and to whom they should apply. As there were few published rules, official or un-official, on the subject, the public were utterly in the dark. Towards the end of 1938 the Government of Bengal, therefore, appointed a Special Officer (subsequently designated "Employment Adviser") to make a survey of the state of employment in the various industries, trades and public utility undertakings in Bengal, with special reference to the proportion of Bengali and non-Bengali employees and the prospects of further absorption of Bengalis, particularly of the educated middle classes, therein. The investigation was completed by the end of 1939 and, with the facts and figures elicited in course of the enquiry, the preparation of this Handbook was decided upon.

## How the data have been compiled.

It was no easy task to secure detailed information about the state of employment in the various industries, trades and professions in Bengal. There were no official or un-official publications on the subject nor were any figures of employment available from any Report or Memorandum. The Employment Adviser had, therefore, to get in touch with the various Chambers of Commerce in Calcutta and, through them, to the individual mills, factories and firms, and to appeal for their co-operation in this matter of compilation of facts and figures. Although at first there was some murmur from some firms (mainly on the ground that the supplying of these facts and figures would mean additional work for them), eventually all the firms agreed to co-operate. An Employment Enquiry Form was then drawn up by the Employment Adviser and each mill, factory or firm doing business in Bengal was requested to supply information on this Form either direct to Government or through the appropriate Association or Chamber of Commerce. An assurance was given that Government were interested only in

tabulating the information for each industry or trade and did not want to publish details of the state of employment in each separate establishment.

During the whole year of 1939, replies giving particulars of employees began to pour in. Mills, factories and firms under European control and management chose to send their replies through their Associations or Chambers, while Indian owned concerns generally sent their replies direct. In most cases, however, at least two to three reminders had to be given before a reply could be had and five to six reminders were also not uncommon. Sometimes some concerns, after receiving five or six reminders, would naïvely say that the letter and the Form had been mislaid and request Government to be so good as to send fresh copies thereof. For this reason, an investigation which could have been easily finished in, say, six to eight months actually took a whole year.

When at least 85 per cent. of the mills, factories or firms belonging to a particular industry or trade had sent in their information, their figures were collated and tabulated according to the main grades of employees in each industry or trade and, from the averages of these figures, a picture of the state of employment in all the mills, factories or firms in a particular industry or trade was worked out. Therefore, while the figures of employment given in this Handbook should not be taken to be mathematically accurate, they may be regarded as sufficiently accurate for general statistical purposes and also adequately representative of the state of employment in each industry or trade surveyed. Similarly, the statements made regarding pays and wages, while not mathematically accurate, are true enough to give a correct picture of remunerations earned by different grades of employees. It may be noted in this connection that, in each industry or trade surveyed, *all* the important firms and factories sent in their data, so that the picture presented in the following pages is a fairly accurate description of present day conditions.

### Some broad conclusions.

From the data collected, the most important conclusion at which we may arrive is that (the proportion of Bengalis employed in the various trades and industries in this province is conspicuously low. Moreover, even where Bengalis form a reasonably adequate proportion of total employees, it has been found that, except in the grade of clerks and office assistants, it is mainly illiterate or semi-literate Bengalis who find employment, and not educated Bengali lads with school or college education.

Now, for this state of affairs, Bengali young men themselves have been partly to blame. In a mill or a factory, a workman employee, whether he is skilled or unskilled, has to dirty his hands and clothes, do a considerable amount of manual labour and stand a good deal of physical strain and fatigue. He has also to work side by side with ordinary mistriis and to submit to the necessary discipline of manufacturing establishments. Until recently, Bengalis, particularly of the so-called *bhadralog* classes, have generally been unwilling to do such work, or, even if put to such work, have not applied their whole heart to it, with the result that employers in general have been able to retort that Bengalis are not fitted to work in mills and factories. Quite a few benevolent employers have, from time to time, attempted

to replace non-Bengali workers by Bengalis, but their efforts have not always been attended with success; in some instances Bengali young men have left the employment after a time on the pretext that the work offered was not "suitable".

On the other hand, employers in Bengal cannot be absolved of the charge of a certain apathy in the matter. While a few employers have made serious efforts to take in Bengali workmen and train them up, a majority of them have only tinkered with the idea and have tried to get rid of Bengali employees on some very minor pretext or provocation. In recent years, (unemployment has become so very acute among the educated middle classes of Bengal that many bright Bengali lads have shaken off their age-old prejudices with regard to manual labour, and have repeatedly expressed their anxiety to start as ordinary workmen or operatives) but they have found the doors of many mills and factories closed against them on the old plea that they do not make efficient workers.

### **A change of attitude necessary on both sides.**

A survey of the present state of employment in the industries or trades of Bengal would inevitably raise the question "What about the future?" If we are to have a better future, i.e., if we are to have employment for men of this province in our industries and trades to a much larger extent than at present, there must be a change in the mental attitude on both sides. Bengali young men, the employees of to-morrow, must be willing and able to adjust themselves to the undoubtedly different conditions of work in mills and factories and must give up their eternal hankering after a safe office job as the *summum bonum* of their life. They must seek employment as ordinary workers, operatives and mistris in the various mills and factories in this province and must be prepared to start at the bottom and gradually work their way up. *In other provinces and in other countries, this is the manner in which a large percentage of educated youths make their living and there is no reason why we should not have the same process in Bengal as well.*

Employers, on the other hand, must realise their responsibility towards the younger generation of the province in which they are trading and must try to train up for future vacancies as many Bengali lads as possible. The anomalous position of having to run the mills and factories of this province mainly with the help of non-Bengali workers should not be allowed to continue for ever. *If only employers are prepared to give educated lads of this province a real chance, it should not be difficult to work out an all-round and comprehensive scheme of apprenticeship in every branch of industry and trade and in every grade of employment therein.* As a matter of fact, in the prevailing state of unemployment, most parents and guardians would welcome such an idea.

### **A popular fallacy exposed.**

In this connection it will not be out of place to expose a very popular fallacy, viz., that further industrialisation alone will solve the problem of middle class unemployment in Bengal. While it is not denied that further industrialisation must open up additional avenues of employment for everybody, it should not be overlooked that if, in the

additional avenues so opened up, non-Bengalis and illiterate Bengalis continue to have the major share, as they are now having, the mere setting up of new mills, factories and other undertakings will not solve the problem of unemployed middle class Bengali youths. The present survey teaches the very important lesson that, side by side with a drive for further industrial development, the youngmen of Bengal must also make every use of the opportunities which already exist, so that in any future scheme of things they may have their full and legitimate share. The problem is not merely one of *creating* new opportunities: it is very much one of *exploiting* all available opportunities.

### **This Handbook is a guide for both employers and potential employees.**

This Handbook is primarily meant to be a guide for the young men of Bengal—such potential employees as would seek a career in industry or trade. It indicates what the present opportunities of employment are, what salaries or wages can be had in certain types of work, and what special qualifications or training young men should acquire before they apply for those jobs. The Handbook is, however, also meant to be a guide for employers in as much as it indicates in what grades or classes Bengalis are too few in number and in which of them they can be given preference when future recruitments are made.

### **About the Appendices.**

Two Appendices have been added to the Handbook. Appendix I gives consolidated figures of employees and the percentages of Bengalis and non-Bengalis employed in the more important of the industries and trades surveyed. At a glance, it serves to indicate to what a large extent young Bengali lads may find additional avenues of employment in industry and trade, if only they would come forward and if employers would give them a chance. Appendix II, on the other hand, gives lists of the principal registered mills, factories and firms in Bengal. These lists are expected to help Bengali lads in the matter of applying for posts for which they are qualified.

### **Co-operation of business houses.**

In this connexion, it may be mentioned that this survey would never have been possible but for the very willing help and assistance given by the various Chambers of Commerce and Trades Associations in Bengal as well as by such mills, factories or firms as are not affiliated to any particular Chamber or Association. To all of them the Employment Adviser desires to express his grateful thanks. He also likes to put on record his sincere appreciation of the kindness and courtesy shown by various mill, factory and firm managers when he personally visited a number of mills, factories and firms to get first-hand information about conditions of employment there. He only hopes that this co-operation and courtesy will now be extended to the more practical sphere of working out apprenticeship schemes for Bengali youths.

### Conclusion.

In conclusion, it may be emphasised that this survey of new opportunities of employment in the industries, trades and professions of Bengal does not presume to offer a solution of the problem of middle class unemployment. Unemployment among the educated middle classes of Bengal is due to a number of basic handicaps, social, educational and economic, and no "solution" of the problem can be attempted by a particular office or department of the Government. This Handbook, however, seeks genuinely to help educated young men of this province by indicating to them some new opportunities of employment—opportunities of which they have heard comparatively little so far, but which they must now seize without any hesitation. If, after a perusal of the following pages, at least some of them step out of their traditional groove and seek to prove that even in industry and trade they can make as good officers and workers as Europeans or non-Bengali Indians, and if employers in Bengal also play their part without any mental reservation, the time and energy expended in preparing this Handbook will have been well spent.

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**PART I.**  
**Industries.**

# PART I.—Industries.

## I.—Cotton Mills.

### Introductory.

1. The progress of the cotton textile industry in Bengal has always kept pace with the progress of the industry in other parts of India and although the number of mills working in Bengal is less than 10 per cent. of the all-India total, they solve the bread-earning problem of a large section of the population and offer unique scope of employment to persons who have had school or college education.

2. More than 75 per cent. of the cotton mills of Bengal are organised in an Association called the Bengal Mill-owners' Association, but there are a few European and other cotton mills which are not members. Some of the non-member mills are rather small and do not employ more than 500 to 600 hands each. Enquiries were, however, addressed to both member and non-member mills working in the Province. From the data supplied by these mills, it appears that the total employment in the cotton mills of Bengal is over 31,000. Of these over 18,500 are Bengalis and about 12,500 are non-Bengalis.

### An analysis of the Table.

3. The Table at the end shows that of the 31,281 employees, 18,740 (or 60 per cent.) are Bengalis and 12,541 (or 40 per cent.) are non-Bengalis. Analysing the figures department by department, we find that the largest number of non-Bengalis occur in the spinning department (54 per cent.), closely followed by the general establishment (46 per cent.) and the dyeing and bleaching departments (46 per cent.). The figures for the general establishment include, however, nearly 1,000 menials of various types and, if they are left out of consideration, the percentage of Bengalis increases appreciably. In the weaving and engineering departments 64 and 61 per cent. of the employees are Bengalis and the apprentices in the various departments are mostly (95 per cent.) Bengalis.

### Qualifications and remunerations of employees.

4. In the general establishment, managers, assistant managers and secretaries happen to be Bengalis or non-Bengalis according as a mill is, or a majority of its shares are, owned by Bengalis or non-Bengalis. There are of course exceptions to this general rule and instances are not rare of Bengalis being appointed managers, assistant managers or secretaries although the mill happens to be under the financial control of non-Bengalis. These persons must have administrative ability, must be conversant with trade and business conditions and must have some knowledge of the methods and technique followed in each department. They must also possess organising ability and be competent to handle labour with tact. Their remuneration varies from Rs. 250 to

Rs. 1,500 per month. In some mills, they also get a commission on net profits.

5. Officers and their assistants mentioned under the general establishment really belong to the various departments and are, more or less, departmental heads and assistants therein. Such persons must have a thorough knowledge of the technique and methods followed in their respective departments and must also know how to handle labour tactfully. Generally speaking, they should be people who have had some previous technical training in a Government textile institute or a textile mill. The remuneration ranges from Rs. 75 to Rs. 700 per month. In some mills, the departmental heads also participate in net profits.

6. In the spinning departments, masters and assistant masters must possess the necessary certificate in spinning from a Government textile institute or a textile mill. They must also be able to control and guide supervisors and operatives under them. Their pay ranges from Rs. 50 to Rs. 350 per month. Supervisors in this department as in other departments are generally persons promoted from the rank of operatives. They get pay varying from Rs. 35 to Rs. 100 per month. Operatives are mostly persons without any previous technical training, although there are mills which would employ only such persons as have had some previous training in a mill or an institute. Operatives are often on a daily or weekly pay roll. Their monthly remuneration ranges from Rs. 20 to Rs. 40 per month.

7. In the weaving and dyeing and bleaching departments also, masters and assistant masters must possess the necessary knowledge of weaving or dyeing and bleaching, as the case may be, and must be able to control and guide operatives and workmen under their control. Their pay ranges from Rs. 50 to Rs. 350 per month.

8. Supervisors in the weaving department are mostly promoted men from the rank of operatives. Their pay varies, as in the spinning department, from Rs. 35 to Rs. 100 per month. Operatives are generally persons without any previous technical training, although there are mills which are reluctant to employ such persons and insist on their workmen having had previous training in some other mill. The monthly remuneration of operatives in the weaving department ranges from Rs. 20 to Rs. 60 per month and that of workmen in the dyeing and bleaching departments ranges from Rs. 20 to Rs. 35 per month.

9. Engineers and assistant engineers in the engineering department must possess a good degree or diploma in mechanical engineering plus practical experience. Some of the engineers employed in the cotton mills of Bengal possess good foreign degrees and diplomas and also certificates of having had intensive practical training in foreign workshops. Their pay varies from Rs. 100 to Rs. 750 per month.

10. Mechanics in the engineering department sometimes possess a degree or diploma in mechanical engineering, but more often they are persons who have had only practical training in a reputed engineering firm or workshop. Sometimes they are men promoted from the rank of mistris. Their pay ranges from Rs. 35 to Rs. 150 per month. Mistris, on the other hand, are generally illiterate people or people with only a smattering of education, but they are hardy and have started from the bottom and learnt the intricacies of factory machinery by sheer application and perseverance. Their pay ranges from Rs. 20 to Rs. 50 per month.

11. Unskilled coolies in the various departments do not generally have to do work involving knowledge of any of the stages of production or of the machinery, but sometimes the more intelligent of them get promoted to the rank of operatives and thereby earn higher wages. The wages of unskilled coolies vary from Rs. 10 to Rs. 25 per month.

12. An interesting feature in the cotton mills of Bengal is the large number of apprentices. Sometimes these apprentices belong to a particular department and sometimes they are borne on the general establishment. Apprentices have begun to figure as an appreciable section in the employment roll only in recent years. As the problem of middle class unemployment became very acute many parents and guardians started thinking of the scope of employment cotton mills provide and it was at their request that mill managers or secretaries began to take in a few such young men every year. The idea is that these apprentices will learn the work in six to eighteen months' time and then get absorbed in the rank of workmen, operatives or supervisors, according to their ability and qualifications.

#### Some general observations on prospects of further employment of Bengalis.

13. As the Table shows, there is scope for employment of a large number of Bengalis in the cotton mills of Bengal. It could not be ascertained with any degree of accuracy what the annual vacancies are in these mills, but a separate enquiry conducted by the Director of Industries in the year 1937 showed that there were roughly 1,750 vacancies annually in the 17 mills covered by that enquiry. For the 30 and odd cotton mills of Bengal, we would place the figure at anything between 2,500 and 2,800. Even taking the lower figure and deducting from it the number of employees who belong to the class of menials and unskilled coolies, the number of vacancies, advantage of which can be taken by the unemployed young men of Bengal, comes to at least 1,500 to 1,800 annually. This is no small figure and there is no reason why in future recruitments Bengalis should not get in in larger numbers.

14. This brings us to the most difficult aspect of the whole question. Many of the cotton mill employers are perfectly willing to take in Bengali hands, but they complain that the average Bengali, particularly when he comes from the so-called *bhadralog* classes, does not like to work under factory conditions and always remains dissatisfied. He never puts his heart to the work and leaves it on the slightest pretext or provocation. The result is that employers are driven to the conclusion that Bengali *bhadralog* youths do not make efficient and contented mill hands.

15. There is, however, another side of the picture. The cotton mills that have sprung up in Eastern Bengal have, unlike the other cotton mills, a very large percentage of Bengali employees and two of them (the two factories of the Dhakeswari Cotton Mills, Limited, in the Dacca district) have an exclusively Bengali labour roll. This demonstrates that a part at least of the dislike of the Bengali towards work in factories is due to the unsatisfactory housing, sanitary and social conditions in the labour areas in and around Calcutta. In the Eastern Bengal cotton mills, there are very good residential barracks for workers

and operatives, and the general sanitary condition and social atmosphere are also infinitely better than in the mills round about Calcutta. A few Calcutta mills have recently started better housing schemes with improved sanitary facilities for their employees and the number of Bengali employees is found to be appreciably larger in these mills than in others. It seems, therefore, that if housing, sanitary and social conditions be improved, more Bengalis would be attracted to employment in cotton mills. As things stand, Bengalis find it difficult to conform to the style of living which quite suits the average up-country operative.

16. Notwithstanding what has been said in the previous paragraph, it must be admitted that Bengalis are not industrially or commercially minded and that is the main reason why their share of employment in the cotton mills is so small. This is evident from the further fact that of the huge army of cotton merchants and brokers in Bengal, only one is a Bengali firm and all the others are non-Bengalis. Bengalis seem either to think that no training is necessary for the profession of cotton merchants and cotton brokers or that it is beneath them to take to these occupations. Either of these two attitudes is a great mistake. Years of study, experience and patient work are needed in the trade of cotton merchants and cotton brokers as well.

17. The above argument applies to almost all employments inside the cotton mills. Non-Bengalis predominate in those departments where work is strenuous and is apt to make the worker's hands dirty. This apathy towards strenuous and so-called dirty work must go. Bengali young men must realise that there is nothing degrading in work involving manual labour.

### Courses of training for Bengalis young men.

18. Another important point to remember is that many of the workers in the cotton mills do not possess proper qualifications. Firstly, many of them are illiterate and it is almost a truism that an illiterate workman is less efficient than a literate one. Secondly, in every department, some special technical or practical qualification is required, but a large number of workers do not have any such qualifications. It should not be forgotten that a trained man has always a better chance of securing employment than an untrained one, provided he is prepared to conform to rules of work inside the factory.

19. In Bengal, the Government Textile Institute at Serampore gives good training to those who seek employment in textile mills. Those who have passed the Matriculation examination can take the Higher class course of Weaving and Spinning, and there is an Artisans' course for those who are non-Matriculantes. Power looms have recently been installed in this Institute and various other improvements have been made. Recently, a short six months' course for such persons as would like to start life as ordinary mill operatives has been introduced. Then again there is the famous Victoria Jubilee Technical Institute, Bombay, where there is an exhaustive four-year course on Textile Manufactures. The diploma of L.T.M. is awarded to students who complete their course and satisfactorily pass the four sessional examinations. A special period of practical training for six months in a cotton mill is

covered in this course. Students must be at least Matriculates, but I.Sc.'s are preferred. For special training in dyeing and bleaching, the Chemical Technology course (three years) of the Kala Bhaban Technical Institute, Baroda, and the Textile Chemistry course (three years) of the Victoria Jubilee Technical Institute, Bombay, may be recommended. The Chemical Technology course (two years) of the University of Bombay also provides very specialised training in textile chemistry. Finally, those who are more ambitious may go abroad and have excellent courses in cotton manufacture at the Municipal College of Technology, Manchester. There is a degree and a certificate course and the laboratories at Manchester contain all the most up-to-date machinery and chemical appliances, and the progresses of dyeing, printing and colouring of cotton fabrics can be thoroughly studied there. It is, however, advisable that those who want to go to Manchester for this special training should spend at least a year in an Indian cotton mill before proceeding abroad.

TABLE.

## Employment in the Cotton Mills of Bengal.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
<i>I.—General Establishment.</i>					
Manager, Assistant Managers and Secretary ..	16	9	25	64	36
Officers and their Assistants ..	59	16	75	79	21
Clerks .. ..	414	47	461	90	10
Menials of various types ..	340	641	981	35	65
Total ..	829	713	1,542	54	46
<i>II.—Spinning Department.</i>					
Masters and Assistant Masters .. ..	20	8	28	71	29
Supervisors .. ..	58	17	75	77	23
Operatives .. ..	3,001	3,279	6,280	48	52
Unskilled coolies ..	1,248	1,701	2,949	42	58
Total ..	4,327	5,005	9,332	46	54
<i>III.—Weaving Department.</i>					
Masters and Assistant Masters .. ..	40	12	52	77	23
Supervisors .. ..	48	16	64	75	25
Operatives .. ..	8,249	4,277	12,526	66	34
Unskilled coolies ..	1,780	1,301	3,081	58	42
Total ..	10,117	5,606	15,723	64	36
<i>IV.—Dyeing and Bleaching Department.</i>					
Masters and Assistant Masters .. ..	22	6	28	70	30
Workmen .. ..	192	184	376	51	49
Unskilled coolies ..	82	67	149	55	45
Total ..	296	257	553	54	46
<i>V.—Engineering Department.</i>					
Engineers and Assistant Engineers .. ..	48	5	53	91	9
Mechanics .. ..	182	32	214	85	15
Mistris (including fitters, firemen, etc.) ..	872	523	1,395	64	36
Coolies .. ..	242	298	540	45	55
Total ..	1,344	858	2,202	61	39
<i>VI.—Apprentices in various departments ..</i>					
	1,827	102	1,929	95	5
Grand Total ..	18,740	12,541	31,281	60	40

## II.—Jute Mills.

### Introductory.

1. The jute industry is the largest and most important industry in Bengal and there are some 100 jute mills in the province (all concentrated in the suburbs of Calcutta and the three neighbouring districts of Howrah, 24-Parganas and Hooghly) providing employment to over two lakhs of people. A very considerable majority (76 per cent.) of the jute mill employees, however, happen to be non-Bengalis.

### An analysis of the Table.

2. The Table at the end shows that of the 2,03,817 jute mill employees in Bengal, only 49,668 (or 24 per cent.) are Bengalis. Analysing the figures department by department, we find that it is only in the General Establishment that there is any considerable number (85 per cent.) of Bengalis. In almost all other departments—batching, preparing, spinning, winding, weaving and finishing—Bengalis form a very small proportion of the total number of employees, the actual figures being 8, 18, 29, 11, 28 and 6 per cent. respectively. In the mechanical department, however, Bengalis form 57 per cent. of the total number of employees.

3. Analysing the figures still further, we find that Bengalis are very few (only 3 to 17 per cent.) in the groups of unskilled and unclassified workmen. In the groups of skilled and semi-skilled workmen, their proportion ranges from 14 to 35 per cent., with the exception of the weaving department where they form 76 per cent. of the total number of employees in that grade.

4. In this connexion it may be pointed out that the composite figures given in the Table are based on the individual replies received from the various jute mills and by reason of the difference in conditions and practice of the different mills, they do not give more than an approximate description of the position as a whole. The recent War also has brought about certain changes which are not incorporated in the figures. Nevertheless, the statements made in the Table are, on an average, of general application to all jute mills in Bengal and the figures may be accepted as reasonably accurate.

### Qualifications and remunerations of employees.

5. We may now examine the qualifications of the various grades of employees and the remunerations (pay or wages) they generally receive. In the General Establishment, "officers" include all the departmental heads and their assistants: they are persons who have practical experience of jute mill management and also technical knowledge of different branches of jute manufacture. ("Officers" in almost all the jute mills are Europeans.) This is because fully qualified Bengalis are not generally available and also because European supervision is considered to be necessary in all the departments. The pay of European officers varies from Rs. 300 to Rs. 1,200 per month and that of Indian



officers from Rs. 70 to Rs. 600 per month. Europeans are usually recruited from Great Britain through the Head Office in Calcutta and through the Dundee Agency; Indians are generally recruited direct by mills.

6. Clerks in jute mills must have had good school education (matri-  
 culates are generally preferred) and must have knowledge of English,  
 time-keeping and book work. Many mills keep approved lists of  
 applicants from which recruitments are made when required. The  
 pay in this grade varies from Rs. 20 to Rs. 250 per month.

7. We next come to the various manufacturing departments. In  
 all these departments, "sirdars" are the key men; they must have  
 knowledge of supervision and also of the work of the department.  
 Generally, they are men promoted from the rank of skilled and semi-  
 skilled workmen. Their pay ranges from Rs. 15 to Rs. 75 per month.

8. Skilled and semi-skilled workmen in each department must know  
 the work of that department. Thus, in the batching department, they  
 must know how to select or feed softeners or cut and weigh jute; in the  
 preparing department, they must have knowledge of the preparing  
 process; in the spinning department, they must be able to attend the  
 spinning frame efficiently; in the winding department, they must be  
 able to attend winding or beaming machines and beaming operations;  
 in the weaving department, they must be able to attend a loom and  
 perform the weaving operations; in the finishing department, they must  
 be able to perform one of numerous operations in connexion with the  
 finishing of cloth. The pay of these workmen in the various depart-  
 ments varies from Rs. 14 to Rs. 50 per month.

9. Finally, we come to the unskilled and unclassified workmen.  
 These have to do most of the heavy manual work and must, therefore,  
 possess excellent health and good physique. The pay ranges from  
 Rs. 10 to Rs. 25 per cent.

10. In the mechanical department, mistris must have knowledge  
 of erection and maintenance of departmental machinery, electrical  
 engineering, steam generation, etc. Sometimes young lads are taken  
 in as apprentices and, after a fairly long period of training, they are  
 absorbed in permanent vacancies as and when they occur. The pay of  
 mistris in the mechanical department varies from Rs. 15 to Rs. 150  
 per month. Coolies and unclassified workmen in this department are  
 paid the same rates of wages as in other departments.

#### **The future and prospects of further employment of Bengalis.**

11. As the figures show, there is practically unlimited scope for  
 the employment of Bengalis in the jute mills of Bengal. It may be  
 argued that Bengalis do not make good workmen, but the very fact that  
 they have proved good workmen in other industrial undertakings (e.g.,  
 cotton mills, general engineering workshops, iron and steel works,  
 etc.) would seem to indicate that there is nothing inherently wrong  
 with Bengali labour as such. The fact is that non-Bengali labour has  
 so entrenched itself in the various jute mills in and round about Calcutta  
 that it may prove very difficult to dislodge them from there. Neverthe-  
 less, it is obvious that in view of the extent of unemployment among  
 Bengalis in Bengal, genuine efforts must be made to introduce Bengali  
 workers in at least some of the departments.

12. Perhaps Bengali young men of the *bhadralog* classes will not at first feel enthusiastic over prospects of employment as workmen. But if a system of apprenticeship is evolved for each department in a jute mill (it works very well in the mechanical department of a few jute mills), as is being done in most cotton mills, we may reasonably hope that young Bengali lads with some school education will gladly come forward to work as skilled and semi-skilled workmen. Of course it will be necessary for the latter to appreciate the dignity of manual labour and to agree to work under comparatively uncongenial factory conditions, but given good will on both sides, it should not be difficult to make the apprenticeship scheme a success.

13. Then there is the question of further employment of Bengali young men in the grade of "officers". It is true that at present fully qualified Bengalis are not available, but this is, at least in part, due to the fact that hitherto it was the policy of most jute mills not to take in Indians in the grade of "officers". Recently, this policy has undergone a slight change: three Bengali lads were selected by the Indian Jute Mills Association and sent to Dundee for training some time ago with a view to their being eventually appointed as "officers". But a lot more still remains to be done.

#### **Facilities for training in jute textile manufacture at Dundee, Scotland.**

14. To those who want to have a career as "officers" in jute mills, the Dundee Technical College, Scotland, offers very good training. There is a special department of Textile Manufacture in this college where instruction is given in jute and flax spinning, rope and twine making, jute and linen weaving, cloth finishing and textile design. A full course of study, embracing these subjects and also such auxiliary subjects as engineering drawing, chemistry, motive power, engineering and art, entails attendance at the College for at least two years. If, however, instruction is desired only in the spinning of ordinary yarns and the weaving of simple fabrics, a one year's course is sufficient. Students studying in the Textile Manufacture section of the College may also qualify for the award of a Full Technological Certificate of the City and Guilds London Institute. The Textile Manufacture section at the Dundee Technical College is equipped with the latest types of machinery which enable all the processes for the spinning and weaving of jute and linen fabrics to be studied practically.

TABLE.

## Employment in Jute Mills.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
<b>1. General Establishment.</b>					
Officers .. ..	46	725	771	6	94
Clerks .. ..	6,336	407	6,743	94	6
Total .. ..	6,382	1,132	7,514	85	15
<b>2. Batching Department.</b>					
Supervisors and Sirdars ..	87	400	487	18	82
Skilled and semi-skilled workmen .. ..	791	2,518	3,309	24	76
Unskilled workmen .. ..	397	4,529	4,926	8	92
Unclassified workmen .. ..	295	9,822	10,117	3	97
Total .. ..	1,570	17,269	18,839	8	92
<b>3. Preparing Department.</b>					
Supervisors and Sirdars ..	263	1,003	1,266	21	79
Skilled and semi-skilled workmen .. ..	1,896	3,450	5,436	35	65
Unskilled workman .. ..	606	2,911	3,517	17	83
Unclassified workmen .. ..	2,096	14,356	16,452	13	87
Total .. ..	4,861	21,810	26,671	18	82
<b>4. Spinning Department.</b>					
Supervisors and Sirdars ..	524	1,373	1,897	28	72
Skilled and semi-skilled workmen .. ..	6,167	12,870	19,037	32	68
Unskilled workmen .. ..	275	2,845	3,120	9	91
Unclassified workmen .. ..	142	908	1,050	14	86
Total .. ..	7,108	17,996	25,104	29	71

	Bengalis.	Non-Bengalis.	Total.	Percent- age of Bengalis.	Percent- age of non- Bengalis.
<i>5. Winding Department.</i>					
Supervisors and Sirdars ..	26	173	199	13	87
Skilled and semi-skilled workmen .. ..	1,517	7,432	8,949	17	83
Unskilled workmen ..	142	908	1,050	14	86
Unclassified workmen ..	859	12,727	13,586	6	94
Total ..	2,544	21,240	23,784	11	89
<i>6. Weaving Department.</i>					
Supervisors and Sirdars ..	472	1,459	1,831	24	76
Skilled and semi-skilled workmen .. ..	9,227	2,917	12,144	76	24
Unskilled workmen ..	905	4,332	5,237	17	83
Unclassified workmen ..	4,889	31,205	36,094	13	87
Total ..	15,493	39,913	55,406	28	72
<i>7. Finishing Department.</i>					
Supervisors and Sirdars ..	55	392	447	12	88
Skilled and semi-skilled workmen .. ..	844	5,249	6,093	14	86
Unskilled workmen ..	431	6,784	7,215	6	94
Unclassified workmen ..	540	15,048	15,588	3	97
Total ..	1,870	27,473	29,343	6	94
<i>8. Mechanical Department.</i>					
Mistria .. ..	6,311	1,518	7,829	83	17
Unskilled coolies ..	294	3,572	3,866	8	92
Unskilled workmen ..	3,235	2,226	5,461	59	41
Total ..	9,840	7,316	17,156	57	43
Grand total ..	49,668	1,54,149	2,03,817	24	76

### III.—Jute and Cotton Presses.

#### Introductory.

1. The jute and cotton industries are two of the most important industries in Bengal and, to keep jute and cotton mills going, a large number of jute and cotton presses have sprung up all over the province. As the term "press" indicates, in these establishments raw jute or cotton (as the case may be) is pressed and packed and sold to the various jute and cotton mills, and also exported abroad. In Bengal, there are some 15 cotton presses and 100 jute presses, and between them they provide employment to over thirty thousand people: 61 per cent. of these are Bengalis and the rest are non-Bengalis. Of the 115 cotton and jute presses in Bengal, only 22 are affiliated to the Calcutta Hydraulic Press Association.

#### An analysis of the Table.

2. The Table at the end shows that of the 30,676 jute and cotton press employees in Bengal, as many as 11,984 (or 39 per cent.) are non-Bengalis: Analysing the figures department by department, we find that while in the General Establishment 70 per cent. of the employees are Bengalis, in the Technical and Engineering staff only 58 per cent. are Bengalis and the rest are non-Bengalis. Studying the figures more closely, we find that Managers and Assistant Managers are mostly (75 per cent.) non-Bengalis and so also are Engineers and Assistant Engineers (64 per cent.). In other grades, Bengalis form a comparatively reasonable proportion of the total number of employees, although many would like to see a much larger percentage of them there.

#### Qualifications and remunerations of employees.

3. Managers and Assistant Managers are mostly non-Bengalis (Europeans or non-Bengali Indians) because most of the cotton and jute presses in Bengal are controlled by them. During the last 25 years, many presses which had formerly been under the control of Bengalis passed into the hands of Marwari merchants mainly because the latter were more economical, painstaking and enterprising than the former. They also had the advantage of good backing from amongst other members of their community—an advantage Bengali merchants did not possess. Managers and Assistant Managers of cotton and jute presses are expected to have practical experience of the jute trade and also to know how to get regular supplies of raw cotton and jute. Their pay varies from Rs. 100 to Rs. 750 per month.

4. Engineers and Assistant Engineers are generally employed only in the *pucca* presses. They must possess practical qualifications in mechanical engineering and must know how to handle hydraulic press machinery. Their pay varies from Rs. 75 to Rs. 500 per month.

5. In the General Establishment, purchasers must be local men with wide experience of jute or cotton crop cultivation and must also know how to buy the raw-crop from the cultivator at the cheapest

possible price. Purchasers are often employed "for the season" only and their pay varies from Rs. 30 to Rs. 150 per month. Clerks are generally matriculates, under-graduates and graduates, and get pay varying from Rs. 25 to Rs. 100 per month.

6. Skilled mechanics are generally men of good physique with a keen commonsense. They are expected to know how to handle press machinery and also to attend to some stage of the manufacturing process. Some of them get trained in the Narayanganj factory of Messrs. Ralli Brothers, Ltd., under an apprenticeship system. Their pay ranges from Rs. 18 to Rs. 75 per month.

7. Finally, there is the large army of unskilled coolies who have to do most of the heavy, manual work. Their pay ranges from Rs. 10 to Rs. 25 per month.

#### **The future and prospects of further employment of Bengalis.**

8. As the figures show, there is large scope for the employment of Bengalis in the Technical and Engineering staff of jute and cotton presses. The argument of some employers that Bengalis do not make good workmen does not appear to be quite fair because some jute and cotton presses in particular are run almostly entirely with the help of Bengali labour and the employers thereof find them as efficient as non-Bengali labour. It is hoped, therefore, that all jute and cotton press managers will give reasonable preference to men of the province when future recruitments are made.

9. It may, however, be mentioned that very few of the Bengali employees in the Technical and Engineering staff come from the so-called *bhadralog* classes. Employers are only too anxious to employ young lads with school education who are prepared to start as ordinary mistris. As the wages offered are by no means unattractive, it should be possible for our middle class youths to shake off their traditional apathy and inertia and take to these new avenues of employment.

TABLE.

## Employment in Jute and Cotton Presses.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
<b>1. General Establishment.</b>					
Manager and Assistant Managers .. ..	42	128	170	25	75
Purchasers .. ..	1,100	498	1,598	69	31
Clerks .. ..	1,208	142	1,350	89	11
Menials and peons .. ..	3,382	1,696	5,078	67	33
Total .. ..	5,732	2,464	8,196	70	30
<b>2. Technical and Engineering Staff.</b>					
Engineers and Assistant Engineers .. ..	42	74	116	36	64
Skilled mechanics .. ..	3,302	1,682	4,984	66	34
Unskilled coolies .. ..	9,616	7,764	17,380	55	45
Total .. ..	12,960	9,520	22,480	58	42
Grand Total .. ..	18,692	11,984	30,676	61	39

## IV.—Paper Mills.

### Introductory.

1. There are four paper mills in Bengal—the two mills of the Titaghur Paper Mills Company, Limited, the Bengal Paper Mill Company, Limited, and the Indian Paper Pulp Company, Limited. Between them they employ over 7,000 people—not an insignificant figure. The Table at the end covers the figures of employment in all these mills.

### An analysis of the Table.

2. The Table shows that of the 7,169 employees, only 2,541 (or 35 per cent.) are Bengalis and 4,628 (or 65 per cent.) are non-Bengalis. Analysing the figures further, we find that all the Managers are non-Bengalis (as a matter of fact they are all Europeans) and among the covenanted assistants only 2 (or 4 per cent. of the total) are Bengalis. In the group of mechanics also 51 per cent. are non-Bengalis and menials and unskilled labourers, too, are mostly (78 per cent.) non-Bengalis.

### Qualifications and remunerations of employees.

3. Managers and covenanted assistants are almost all specially trained in technical institutions and paper mills in Europe and have several years' experience. They also possess a high degree of administrative ability and know how to handle labour tactfully. The pay of managers ranges from Rs. 700 to Rs. 2,000 and that of covenanted assistants from Rs. 150 to Rs. 1,000 per month. The lesser paid covenanted assistants (those of them who happen to be Indians) are selected from superior grades of mechanics.

4. Next to covenanted assistants, come technical assistants and mechanics. All these persons have received their training in paper mills and allied concerns and have some knowledge of applied chemistry and/or engineering. Their remuneration varies from Rs. 50 to Rs. 550 per month.

5. Menials and unskilled labourers are not required to have any previous training. They must, however, be hardy people and possess a certain degree of commonsense. Not infrequently many persons start as unskilled apprentices and finish up as skilled mechanics and technical assistants. The pay of menials and unskilled labourers varies from Rs. 10 to Rs. 60 per month.

### Some general observations on prospects of further employment of Bengalis.

6. From the Table it is clear that there is scope for considerable further employment of Bengalis in the paper mills of Bengal. For some of the superior posts of covenanted assistants and technical assistants, able-bodied young men with a good degree in applied chemistry



or mechanical engineering would be eminently suited. The possibility of future recruitment of Bengalis in this grade is, however, largely dependent on the attitude of (the millowners and managing agents who are all Europeans)

7. In the grade of technical assistants and mechanics, however, it should not be difficult for enterprising Bengali young men to find decent employment. A science degree or training in a good engineering workshop would be a help and, as the pay is by no means small, there is no reason why educated Bengalis should not be forthcoming for this type of work.

#### **'Courses of training for Bengali young men.**

8. In the opinion of paper mill managers, a five-year period of training in a paper mill either in India or abroad is better than a theoretical or semi-practical course of instruction in a university or a technical institute. The ideal arrangement would be to enter a paper mill as an apprentice, work there for at least two to three years and then go abroad for advanced training. In Great Britain, as a general rule, a three years' course is necessary for which a candidate must possess good knowledge of Physical Chemistry and Organic Chemistry and a certain amount of mechanical and electrical engineering, and also some knowledge of French and German. The manufacture of pulp for paper-making is more or less a separate industry. The College of Technology, Manchester, provides good general courses in paper-making and the Battersea Polytechnic, London, gives a course of one evening a week over three years.

TABLE.

## Employment in the Paper Mills of Bengal.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Managers .. .. .	..	9	9	..	100
2. Covenanted assistants	2	50	52	4	96
3. Technical assistants and mechanics .. .. .	1,429	1,477	2,906	49	51
4. Menials and unskilled labourers .. .. .	862	3,072	3,934	22	78
5. Clerks .. .. .	248	20	268	93	7
Total .. .. .	2,541	4,628	7,169	35	65

## V.—Rubber Factories.

### Introductory.

1. The rubber industry is of comparatively recent growth in Bengal and may be traced back only to the last decade. The most important rubber concern in Bengal, the Dunlop Rubber Company (India), Limited, has its factory at Sahaganj in the Hooghly district and was established a little over three years ago. The other rubber concerns are rather insignificant by comparison, but there are at least 18 of them in Bengal and between them they employ over 3,100 hands. The Dunlop factory alone employs nearly 1,200 hands.

2. The figures given in the Table at the end relate to the Dunlop Rubber factory at Sahaganj and 17 other smaller factories. It would appear that the total employment in the 18 rubber factories in Bengal is about 4,400 and of these about 2,400 are Bengalis and 2,000 non-Bengalis.

### An analysis of the Table.

3. Employees in a rubber factory may be classified into the following main grades—(a) Officers; (b) Technical assistants; (c) Supervisors; (d) Skilled mechanics; (e) Unskilled labourers and menials, and (f) Clerks. The Table shows that of the 4,344 employees, 2,420 (or 56 per cent.) are Bengalis and 1,924 (or 44 per cent.) are non-Bengalis. Analysing the figures further, we find that among officers only 8 per cent. are Bengalis and among skilled labourers as many as 44 per cent. are non-Bengalis. Technical assistants are mostly (80 per cent.) Bengalis while a majority of the supervisors (62 per cent.) are Bengalis. Clerks are almost all (89 per cent.) Bengalis.

### Qualifications and remunerations of employees.

4. Officers are mostly people who have intensive knowledge of the science and technique of production and have also business experience. Many of them have had their training in rubber factories in Great Britain or America. On the other hand, in the smaller concerns many of the "officers" do not possess any special knowledge of the science and technique of production and are, therefore, often unable to guide or control production. The pay of officers ranges from Rs. 150 to Rs. 2,000 per month.

5. Technical assistants are generally intelligent young men who have a good basic knowledge of science (especially Applied Chemistry) and have had some practical training either in the factory in which they have been working or in some other rubber factory. Their pay varies from Rs. 50 to Rs. 350 per month.

6. Supervisors are mostly promoted people from among skilled labourers. Their duty is mainly to supervise the various stages of production and to control labourers under their charge. Their pay ranges from Rs. 30 to Rs. 100 per month.

7. Skilled mechanics are people either with no education at all or with a very meagre school education. They generally acquire skill in the very factories they work in, or in similar factories. Sometimes they are paid on a daily wages basis and sometimes on piece-work rates. Their monthly remuneration ranges from Rs. 20 to Rs. 60 per month. Very often skilled mechanics are persons promoted from the rank of unskilled labourers and coolies. The wages of this latter class vary from Rs. 10 to Rs. 25 per month.

**Some general observations on prospects of further employment of Bengalis.**

8. As has been already noted, there are still many "officers" who do not possess the requisite knowledge of the science or technique of production. The same observation applies to technical assistants. A scheme of apprenticeship, properly worked out, may be able to fill up this gap. It should also be possible for the more ambitious young man to go abroad for high technological training in this subject.

9. It is indeed unfortunate that educated Bengalis are still shy of seeking employment as skilled mechanics. Actually of the 55 per cent. of skilled Bengali mechanics, not even 10 per cent. belong to the *bhadralog* classes. If *bhadralog* young men with a certain amount of school and college education were prepared to start their career as skilled mechanics (the initial remuneration is never less than Rs. 20 per month—it very soon rises to at least Rs. 30 to Rs. 50 per month, if not more, according to the ability and industry of the individual) they would easily be able to compete with illiterate labourers, and might rise to the more responsible position of overseers and technical assistants much more rapidly than their uneducated co-workmen.

TABLE.

## Employment in the Rubber Factories of Bengal.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Officers .. .. .	3	36	39	8	92
2. Technical assistants ..	99	24	123	80	20
3. Supervisors .. .. .	112	68	180	62	38
4. Skilled mechanics ..	1,809	1,448	3,257	56	44
5. Unskilled labourer and menials ..	312	338	650	48	52
6. Clerks .. .. .	85	10	95	89	11
Total .. .. .	2,420	1,924	4,344	56	44

## VI.—Glass Factories.

### Introductory.

1. There are as many as 14 glass factories at work in the province, but (almost all of them follow manufacturing methods that would outrage the susceptibilities of any Western observer. In the Bengal factories, the process of glass blowing is still done by mouth and for this type of work very hardy people are required. The other processes like annealing, cutting, grinding, etc., have also to be done by hand in or near the furnace and as the furnace has to be constantly kept at a very high temperature, workmen who do this type of work must be hardy people who can get used to the heat of the furnace.) It is said that any up-to-date glass factory with improved machinery and furnaces would cost lakhs of rupees, and as Japanese competition is keen and the future prospects of the industry uncertain, no capitalist or entrepreneur ventures to start a glass factory on modern lines. Nevertheless, the fourteen glass factories at work in Bengal provide employment to over 2,300 men and of them less than 400 are Bengalis and the rest all non-Bengalis.

### An analysis of the Table.

2. The Table at the end shows that of the 2,348 employees, only 367 (or 16 per cent.) are Bengalis and the rest (84 per cent.) are non-Bengalis. Analysing the figures further, we find that among officers and experts, only 30 per cent. are Bengalis and among skilled workmen only 15 per cent. are Bengalis. Clerks are, however, mostly (75 per cent.) Bengalis.

### Qualifications and remunerations of employees.

3. Officers and experts are people who have either knowledge of business conditions in the industry and trade, or have intensive knowledge of the science and technique of production. Some of them have had their training in glass factories in England, Germany, Czechoslovakia or Japan, but there are many who have no special knowledge beyond some acquaintance with indigenous methods of glass manufacture. Their pay ranges from Rs. 150 to Rs. 350 per month.

4. In the group of workmen are various types of workers—glass blowers, mould holders, bubble makers, cutters, grinders, annealers, firemen and blacksmiths (for the furnaces). Most of these employees are on a monthly wage basis, their wages varying from Rs. 20 to Rs. 60 per month.

5. Menials and unskilled labourers consist mostly of packers and ordinary coolies. Their wages range from Rs. 10 to Rs. 20 per month.

### Some general observations on prospects of further employment of Bengalis.

6. So far Bengal has had practically no technical experts in glass manufacture and, until recently, two of the glass factories working in Bengal had been dependent entirely on the advice of German (Austrian) experts. If Bengali Science graduates would take an interest in the manufacture of glass, learn the rudiments of the manufacturing process in this country and follow this up by an intensive practical training in Great Britain, Germany or Japan, the industry could certainly be much better organised. It is expert help and guidance that are most lacking at present.

7. The main reasons why Bengalis are so few in the group of workmen and unskilled labourers is that in the present method of manufacture very hardy men are required and Bengalis are notoriously not hardy enough. They are not painstaking enough to stand near the furnace and work in an atmosphere of heat. It is, however, important to remember that quite illiterate people of other provinces are getting decent wages (Rs. 20 to Rs. 60 per month) as workmen in the glass factories of Bengal and there is no reason why able-bodied Bengalis with some school education should not turn their attention towards these opportunities of employment.

8. It should also be possible for enterprising young men to go abroad and learn the practical technique of modern glass manufacture. The University of Sheffield in England has got a special department of Glass Technology. The objects of this department are to provide courses of instruction in all branches of Glass Technology, to carry out systematic investigations for the benefit of the glass industry as a whole and to serve as a central laboratory for the examination of the materials for glass manufacture. There are degree courses covering three to four years, diploma courses covering two to three years and certificate courses for actual apprentices attached to glass workshops. Students proposing to read for the degree should already have graduated in India, taking as their chief subjects at least Chemistry and Physics. Students for the diploma or certificate courses need not be graduates, but it is necessary that they shall produce evidence of satisfactory earlier training and of having been attached to some glass factory.

TABLE.

## Employment in the Glass Factories of Bengal.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Officers and Experts ..	3	7	10	30	70
2. Workmen .. ..	301	1,758	2,059	15	85
3. Menials and unskilled labourers ..	54	213	267	20	80
4. Clerks .. ..	9	3	12	75	25
Total ..	367	1,981	2,348	16	84



## VII.—Cement, Lime and Pottery Factories.

### Introductory.

1. There are 13 cement, lime and pottery factories in Bengal and, between them, they employ as many as 4,000 men. Of these, about 2,600 (or 65 per cent.) are Bengalis and about 1,400 (or 35 per cent.) are non-Bengalis. The Bengal cement, lime and pottery factories are, however, small in size when compared with those outside the province. Nevertheless, the very fact that they employ some four thousand men increases their importance from the employment point of view.

### An analysis of the Table.

2. The Table at the end of this Handbook gives the percentage of Bengalis and non-Bengalis among the various classes of employees in cement, lime and pottery factories in this province. While the percentage of Bengalis employed in this industry is appreciably higher than the percentage found in some other industries (e.g., jute mills and presses, rubber factories and glass factories), in certain categories the number of Bengalis cannot be said to be adequate. In the grade of workmen, 73 per cent. of the employers are of course Bengalis, but in grades of supervisors and unskilled labourers the corresponding percentages are 52 and 60 only. Among officers also, as many as 47 per cent. of the employees happen to be non-Bengalis.

### Qualifications and remunerations of employees.

3. Officers are generally persons who have both technical knowledge and administrative experience. They have either occupied responsible positions in similar undertakings in India or abroad, or have had intensive theoretical and practical training in a good foreign institution or manufacturing concern. The pay of officers varies from Rs. 100 to Rs. 700 per month.

4. Supervisors are generally persons promoted from amongst workmen. They should have technical knowledge and be able to control labour placed in their charge. Their pay varies from Rs. 40 to Rs. 150 per month.

5. Workmen are generally illiterate or possess only a smattering of education. Generally, they start as unskilled labourers and after they have acquired practical knowledge of at least a part of the process of manufacture, they are graded as workmen. The pay of workmen varies from Rs. 20 to Rs. 70 per month and that of unskilled labourers from Rs. 12 to Rs. 25 per month.

### Some general observations on prospects of further employment of Bengalis.

6. For posts of workmen and supervisors one should possess practical knowledge of methods of manufacture and this can, at present, be acquired only in the factories concerned. There are no institutions in

India where one can learn the intricacies of the processes of manufacture. A scheme of apprenticeship, properly worked out, would perhaps help in absorbing at least some unemployed young men in the grade of workmen and supervisors.

7. In the higher posts of officers, one finds various types of employees. Some of them are engineers, civil or mechanical, and they possess the usual qualifications in civil or mechanical engineering plus practical experience. Others are chemists and they are expected to have sound training in applied-chemistry or chemical technology. Still others are experts in pottery and they usually possess foreign qualifications. Finally, there are administrative officers pure and simple who do not possess any technical qualifications, but know how to handle labour and run a factory.

8. So far as foreign training in pottery is concerned, mention may be made of the North Staffordshire Technological College at Stoke-on-Trent, England. There is a very well-equipped pottery department in this College and the work of the department is designed to cover the requirements of students engaged in the ceramic industries, pottery (earthenware, china, glazed tiles, etc.), heavy clay industries (bricks, floor and roofing tiles), and refractories. The department works in close co-operation with the various industries concerned and the practical work is so designed as to be carried out as far as possible under works conditions. Two types of courses are available—(a) a full-time day course covering all branches of ceramics and including supplementary courses in chemistry, fuels and engineering; (b) a part-time day or evening course of more restricted scope. The normal duration of both courses is three years for full-time students and five years for evening students. The normal pottery course is divided into four stages designated Preliminary, Ordinary, Advanced and Honours courses. Those who have passed the Honours examination may go on to the Pottery Managers' course. Graduates or M.Sc.'s of Indian universities in Pure or Applied Chemistry are eligible to go in for these courses. Even Matriculates or I.Sc.'s can be taken in, provided they have spent at least two to three years in a well established cement or pottery concern.

TABLE.

## Employment in Cement, Lime and Pottery Factories.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Officers .. .. .	8	7	15	53	47
2. Supervisors .. .. .	25	23	48	52	48
3. Workmen .. .. .	930	345	1,275	73	27
4. Unskilled labourers and menials .. .. .	1,575	1,042	2,617	60	40
5. Clerks .. .. .	78	12	90	87	13
Total .. .. .	2,616	1,429	4,045	65	35

## VIII.—Aerated Waters and Ice Factories.

### Introductory.

1. There are 12 aerated waters and ice factories at work in Bengal, and they employ over 900 men of whom nearly 150 are Bengalis and over 750 are non-Bengalis.

### An analysis of the Table.

2. The Table at the end shows that of 908 employees, only 136 (i.e., 15 per cent.) are Bengalis and the rest (85 per cent.) are non-Bengalis. Analysing the figures further, we see that except in the grade of clerks, non-Bengalis predominate everywhere. Over two-thirds of the engineers and officers, supervisors and mechanics are non-Bengalis.

### Qualifications and remunerations of employees.

3. Most of the engineers and officers have obtained their training in other factories or business houses in India, but there are one or two who have had some special training in Great Britain or the U.S.A. The pay of this class of employees ranges from Rs. 150 to Rs. 1,250 per month.

4. Supervisors are mostly promoted people from amongst mechanics. They all have had their training in India, either in the factories in which they are employed now or in similar factories or business houses elsewhere. Their pay varies from Rs. 50 to Rs. 150 per month.

5. Mechanics are either illiterate or have a smattering of education. They are able-bodied people who are prepared to do hard work and who possess a certain amount of commonsense. They all start as unskilled labourers and gradually work their way up. Their monthly remuneration varies from Rs. 20 to Rs. 50 per month.

6. Many mechanics and almost all menials and unskilled labourers are casual employees, i.e., they are paid daily wages and are discharged where there is no necessity for their retention. The monthly remuneration of menials and unskilled labourers varies from Rs. 10 to Rs. 30.

### Some general observations on prospects of further employment of Bengalis.

7. The prospects of further employment of Bengalis in aerated waters and ice factories are not very bright. Employment in the grade of mechanics and unskilled labourers is casual and as such Bengali young men of the *bhadralog* classes are not likely to be attracted to it. If we leave out these two classes of employees, the number of available vacancies is considerably reduced and it is debatable if any useful purpose will be served by drawing the general attention of Bengali youngmen to them. It seems, however, that there is considerable scope for improving methods of production in this industry, but that is quite another matter.

TABLE.

## Employment in Aerated Waters and Ice Factories in Bengal.

	Bengalis.	Non-Bengalis.	Total.	Percent- age of Bengalis.	Percent- age of non- Bengalis.
1. Engineers and Officers	6	14	20	30	70
2. Supervisors ..	10	20	30	33	67
3. Mechanics ..	46	184	230	20	80
4. Menials and unskilled labourers ..	46	528	574	8	92
5. Clerks ..	28	26	54	52	48
Total ..	136	772	908	15	<u>85</u>

## IX.—Battery and Drycell Factories.

### Introductory.

1. There are some nine battery and drycell factories in Bengal, all located in or around Calcutta. Besides these, there are a number of local agencies of foreign battery and drycell companies and they also do a certain amount of assembling of parts. The present investigation, however, is concerned with employees in the former class of factories only. There are over 900 such employees and of them only 255 (28 per cent.) are Bengalis and the rest are non-Bengalis.

### An analysis of the Table.

2. The Table at the end relates to figures obtained from the nine battery and drycell factories in or around Calcutta. It would appear that while clerks are almost all Bengalis, most of the mechanics (76 per cent.) and menials (81 per cent.) are non-Bengalis. Even in the grade of managers and officers over 50 per cent. happen to be men who do not belong to this province.

### Qualifications and remunerations of employees.

3. Most of the managers and officers have obtained their training in other factories or business houses in India, but there are a few who have had some special training in Great Britain or on the Continent. The pay of this class of employees ranges from Rs. 100 to Rs. 500 per month.

4. Mechanics include various types of employees—lead burners, welders, fitters, moulders, etc. At present they are mostly illiterate or have only a smattering of education. They are, however, men in good health prepared to do manual work and they must of course possess a certain amount of commonsense. They all start as unskilled labourers and gradually work their way up. Their monthly remuneration ranges from Rs. 25 to Rs. 50 per month. The wages of menials and unskilled labourers vary from Rs. 12 to Rs. 30 per month.

### Some general observations on prospects of further employment of Bengalis.

5. It is the general complaint of managers of battery and drycell factories that Bengali *bhadralog* young men willing to work as mechanics can seldom be found. Of course, a partial deterrent is the fact that wages are rather low in this industry, but even when this allowance has been made we must admit that the attitude of the average Bengali youth towards manual work is the greatest handicap. Until this mentality goes, it will be difficult to persuade employers that educated Bengali young men can make as good mechanics as illiterate upcountrymen.

TABLE.

## Employment in Battery and Drycell Factories.

	Bengalia.	Non-Bengalia.	Total.	Percent- age of Bengalia.	Percent- age of non- Bengalia.
Managers and Officers ..	10	13	23	45	55
Mechanics ..	170	542	712	24	76
Menials and unskilled labourers ..	25	107	132	19	81
Clerks .. ..	50	2	52	96	4
Total ..	255	663	918	28	72

## X.—Pen and Pencil Factories.

### Introductory.

1. There are only three pen and pencil factories in Bengal, all located in or around Calcutta. They employ over 800 men of whom over 500 (64 per cent.) are Bengalis and the rest non-Bengalis.

### An analysis of the Table.

2. The Table at the end relates to figures obtained from the three factories mentioned above. It would appear that clerks and salesmen are all Bengalis and so also are managers and officers. This is mainly due to the fact that all the three concerns are financed and managed by Bengalis. In the grade of supervisors also 86 per cent. are Bengalis and among the workmen and mistris 64 per cent. are Bengalis. It is only in the grade of menials and unskilled labourers that we find an appreciable number (90 per cent.) of non-Bengalis.

### Qualifications and remunerations of employees.

3. All the managers and officers have had their training in other factories or business houses and possess administrative experience. Their pay ranges from Rs. 150 to Rs. 500 per month.

4. Supervisors are persons promoted from the rank of mechanics who have done well as mechanics and are able to control factory hands. They do not possess any special qualifications. Their pay ranges from Rs. 50 to Rs. 125 per month.

5. Mechanics and mistris have not had any special training in an institution, but are specially trained in the factory itself. They generally start as apprentices and then get absorbed as full-fledged employees. Their pay ranges from Rs. 20 to Rs. 80 per month.

6. Menials and unskilled labourers get pay varying from Rs. 13 to Rs. 25 per month. Clerks get pay varying from Rs. 25 to Rs. 100 per month.

### Some general observations on prospects of further employment of Bengalis.

7. As the figures show, non-Bengali element is rather small in the employment roll of pen and pencil factories. There are certain types of work for which Bengalis are found to be unsuitable, but it can be safely prophesied that very soon these types of work, too, will be taken over by Bengalis. Work in a pen and pencil factory is by no means arduous (it is still conducted on a small industry basis) and hence Bengali young men do not find it tiring to have to earn their living there.



TABLE.

## Employment in Pen and Pencil Factories.

	Bengalis.	Non-Bengalis.	Total.	Percent- age of Bengalis.	Percent- age of non- Bengalis.
Managers and Officers ..	12	..	12	100	..
Supervisors .. ..	12	2	14	86	14
Workmen and mistris ..	468	264	732	64	36
Menials and unskilled labourers .. ..	4	36	40	10	90
Clerks and salesmen ..	34	..	34	100	..
<b>Total</b> ..	<b>530</b>	<b>302</b>	<b>832</b>	<b>64</b>	<b>36</b>

## XI.—Salt Factories.

### Introductory.

1. The salt industry is of comparatively recent growth in Bengal, though villagers living on the sea coast have, from time immemorial, been in the habit of preparing salt for their personal consumption from sea water. At present there are only six salt factories at work in Bengal, but it is the belief of industrialists that with adequate State protection more salt factories could conveniently be started in this province. The existing factories give employment to nearly 400 people most of whom are Bengalis.

### An analysis of the Table.

2. The Table at the end shows that of the 384 employees in the six salt factories in Bengal, 332 (or 86 per cent.) are Bengalis and only 52 (or 14 per cent.) are non-Bengalis. This is due to three main factors: firstly, work in a salt factory is not at all hard or exacting and as such Bengali workmen can prove as efficient there as non-Bengalis; secondly, all the salt factories are situated on or near the sea and non-Bengali labour is very scarce in those localities; thirdly, (work in a salt factory is, at least in part, a seasonal occupation and hence suits very well that class of rural labourers in Bengal who pursue agriculture for part of the year and remain almost idle for the rest of it.)

### Qualifications and remunerations of employees.

3. The only decently paid employees are officers and supervisors. They supervise the manufacturing process and control labourers. Very few of them possess any special technical qualifications and most of them have been trained in other mills or factories. Three of the factories have, however, been lucky enough to secure the services of a salt expert each—men who have had at least eight to ten years' practical experience in a Burma or Madras salt works. The pay of supervisors and officers ranges from Rs. 50 to Rs. 200 per month.

4. Workmen and coolies form the largest section of employees in a salt factory. They either attend to the furnace or help at the various stages of the manufacturing process. Their monthly remuneration ranges from Rs. 12 to Rs. 35 per month.

### The future.

5. A very large number of men have to be employed in a salt factory when it is first opened. The work of jungle and earth-cutting, construction, etc., is, however, in the nature of capital outlay and once a factory has been started, not very many men are required to keep it going. The prospect of this industry absorbing a large number of educated middle class youths is limited, because in the rural areas in which a salt factory has to be located, cheap local labour is readily available. It is only as supervisors, officers and experts that Bengali youths may find a career in salt factories, but it is obvious that the number of jobs annually available in these categories must necessarily be few and far between.

TABLE.

## Employment in Salt Factories.

	Bengalis.	Non-Bengalis.	Total.	Percent- age of Bengalis.	Percent- age of non- Bengalis.
Officers and Supervisors ..	12	4	16	75	25
Workmen and coolies ..	305	46	351	87	13
Clerks ..	15	2	17	88	12
Total ..	332	52	384	86	14

## XII.—Aluminium and Enamel Works.

### Introductory.

1. There are 10 aluminium and enamel works in Bengal and between them they employ over 2,700 men. Almost all the aluminium and enamel factories are situated in Calcutta and in the neighbouring districts of Howrah and 24-Parganas.

### An analysis of the Table.

2. The Table at the end shows that of the 2,730 employees, only 1,074 (or 39 per cent.) are Bengalis and 1,656 (or 61 per cent.) are non-Bengalis. Analysing the figures further, we find that in the grade of supervisors as many as 63 per cent. are non-Bengalis and in the grade of workmen as many as 58 per cent. are men who do not belong to this province. Coolies and menials are mostly (87 per cent.) non-Bengalis and it is only in the grade of clerks that we find a majority (75 per cent.) of the men of Bengal.

### Qualifications and remunerations of employees.

3. Most of the managers of aluminium and enamel factories in Bengal do not possess any university or college qualifications in technology; they are generally persons who have acquired practical experience of the manufacturing process in Europe, the United States or Japan. Their pay ranges from Rs. 150 to Rs. 400 per month.

4. Supervisors are persons who have been promoted from the rank of workmen and who are placed in charge of operations in the various departments. Very few of them belong to the *bhadralog* classes. Their pay varies from Rs. 40 to Rs. 100 per month.

5. Workmen constitute the most important section of employees in these factories. There are various types of work that have to be done, e.g., some have to handle special polishing compounds, others have to do "washing", still others have to "spin" or "picket", and quite a few have to work in the press or coating department. In all these, both hard and continuous work and practical skill are required. Workmen are sometimes paid at a daily wage rate and sometimes on a monthly basis. Their pay ranges from Rs. 15 to Rs. 60 per month.

6. Coolies and menials do purely manual work involving little or no skill. Their pay ranges from Rs. 10 to Rs. 20 per month.

### The future.

7. Bengalis have not been attracted to work in aluminium and enamel factories mainly because the work needs patience, and very few Bengalis have got the patience to remain long enough in a factory to acquire the necessary skill. Intelligent handling of materials, tools and machines can be acquired only by long experience and practice and Bengali workmen have been found to be singularly lacking in these qualities. At the same time, there is no denying the fact that aluminium and enamel works in Bengal offer good scope of employment to enterprising young lads and there is no reason why young men of the *bhadralog* classes should not try their luck here.

TABLE.

## Employment in Aluminium and Enamel Works.

	Bengalia.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Officers .. .. .	8	8	16	50	50
2. Supervisors .. .. .	40	68	108	37	63
3. Workmen .. .. .	932	1,268	2,200	42	58
4. Coolies and menials .. .. .	46	296	342	13	87
5. Clerks .. .. .	48	16	64	75	25
Total .. .. .	1,074	1,656	2,730	39	61

### XIII.—Leather and Shoe Factories.

#### Introductory.

1. There are only half a dozen leather and shoe factories in Bengal which are run on modern lines, but there are innumerable small establishments scattered all over the province where leather finishing and shoe-making are carried on either on a cottage industry basis or in individual shops of *mochis* in towns. The present enquiry was, however, confined to such establishments as are run as factories: almost all these are located in or round about Calcutta. They employ over 4,000 men of whom about 68 per cent. are Bengalis and the rest are non-Bengalis. The most important of the leather and shoe factories in Bengal is the factory of the Bata Shoe Company at Bata-nagar, about 15 miles to the south of Calcutta. This factory alone gives employment to over 3,000 men and offers unique facilities to enterprising and educated young lads of the province.

#### An analysis of the Table.

2. The Table at the end shows that of the 4,063 employees in the leather and shoe factories in Bengal, 2,751 (or 68 per cent.) are Bengalis and 1,312 (or 32 per cent.) are non-Bengalis. Analysing the figures further we see that Bengalis are comparatively few in the grades of officers and supervisors, but this is due to the fact that most of the factories are controlled by Europeans or non-Bengali Indians and naturally they like to employ men of their own community in the superior posts. In the group of workmen, however, there is a very decent percentage (75 per cent.) of Bengalis. Bengalis and non-Bengalis are almost equally divided in the group of menials and unskilled labourers.

#### Qualifications and remunerations of employees.

3. Managers and superior officers are persons who possess highly specialised practical knowledge of shoe manufacture and also know how to run a modern factory. In the Bata Shoe factory most of them have had their previous training at Zlin, the home of Bata shoes. In other factories, they have had their practical training in United Provinces or Punjab factories and in leather business generally. Their pay varies from Rs. 200 to Rs. 2,000 per month.

4. Junior officers and supervisors are recruited in two ways. They are either direct-recruits, having had their previous training in some important leather and shoe factory in India or abroad, or they are promoted men from the rank of workmen. In either case, they must know the various processes of leather and shoe manufacture and also know how to control labour. Their pay ranges from Rs. 75 to Rs. 750 per month.

5. Workmen are the most important section of employees in a modern leather and shoe factory. In a highly improved factory like the Batas', they have merely to attend to a machine carrying out a

particular stage of the manufacturing process. Alertness, commonsense and steadiness are required in this type of work and Bengali lads have been found to be very good in this respect. In other shoes factories also, workmen have generally to attend to only one stage of the manufacturing process, but as a certain amount of work with the hand is also required, Bengali youths have not been attracted to these factories in sufficiently large numbers. Skilled workmen are well paid in a leather and shoe factory, their remuneration ranging from Rs. 25 to Rs. 100 per month.

6. Menials and unskilled labourers do work involving little or no skill and requiring only hard manual labour. Their monthly remuneration varies from Rs. 12 to Rs. 25 per month.

#### Where the requisite training can be had.

7. In Bengal, the Bengal Tanning Institute at Entally, Calcutta, offers good opportunities of learning the intricacies of leather and shoe manufacture. There are a well-equipped demonstration tannery and a chemical laboratory. There is accommodation for the training of 24 students at a time and the minimum qualification required is Matriculation pass of the Calcutta University or its equivalent. Non-Matriculates may, however, be admitted if they are connected with hide or leather industry. The course is of two years: one year is devoted to work at the demonstration tannery and the other at the chemical laboratory. The course has been so arranged that every student who passes out becomes both a practical tanner and an efficient industrial chemist. The Bengal Tanning Institute also offers one-year instructional courses in boot and shoe leather goods manufacture: instruction is given by lectures, demonstrations and practical work and any healthy young man of active habits who has had sufficient school education to understand English can go in for these courses.

8. In the Harness and Saddlery section of Government Ordnance and Clothing factories in India also one can get thorough practical training in tannery, currying and saddlery. The courses are from 3 to 4 years and only young men between the ages of 18 and 24 are usually selected for training. As the courses are of an advanced character, candidates must hold an Honours B.Sc. degree in Applied Chemistry or a post-graduate diploma of a recognised Technological Institution.

9. Those who are more ambitious may go abroad. The University of Leeds in England has a three-year course leading to the B.Sc. degree or diploma of the University, and advanced students may also work for the M.Sc. degree. Then there is the Leathersellers' Technical College, Bermondsey, London, where one can take a two-years' course and get the College diploma. The College contains practical workshops fully equipped with the most up-to-date machinery, enabling students to carry out most processes in the manufacture of the chief varieties of leather under what are practically factory conditions. The students carry out the manufacturing processes themselves, taking the hides and skins completely through the various processes, and so become accustomed to the "feel and handle" of leather and to the actual manual operations. There are in addition a large chemical laboratory, bacteriological laboratory, model tanneries, dye house and

finishing shops. The thoroughness and practical value of the training offered at this College are demonstrated by the fact that passed students of this institution now occupy some of the most important positions in the leather industry in the whole world.

### The future.

10. Until recently, educated Bengalis of the *bhadralog* classes more or less shunned work in a leather and shoe factory as this was considered to be an occupation unworthy of the higher castes. This social prejudice has, however, considerably died down and the only deterrents now are the general apathy of Bengalis to any form of manual work and the rather disagreeable smell which must prevail in any leather or shoe factory. Regarding this latter factory, it may be emphasised that in the modern factories of to-day one hardly perceives that extent of disagreeable smell which one would perceive in an ordinary *mochi's* shop or in a hide godown and educated Bengali youths need not, therefore, hesitate to seek employment in these factories.

11. To start as workmen, no special previous qualifications are required. Each factory has its own system of training up workmen. The Bata Shoe factory has got a special department called the Personal department responsible for the employment of new employees. Students who have passed out of an institution like the Bengal Tanning Institute are, however, preferred to raw recruits and it should also be noted that the former have chances of quicker promotion to the rank of supervisors and junior officers.

12. In conclusion, it may be pointed out that there is a singular dearth to-day of Bengalis possessing highly specialised knowledge of the methods of leather and shoe manufacture. If some of our young men would take a preliminary training at the Bengal Tanning Institute, Calcutta, and then go abroad for highly specialised courses of instruction, they should be able to secure at least some of the superior posts now virtually monopolised by Europeans and non-Bengali Indians.



TABLE.

## Employment in Leather and Shoe Factories.

	Bengalia.	Non-Bengalia.	Total.	Percent- age of Bengalia.	Percent- age of non- Bengalia.
1. Managers and Superior Officers .. ..	1	10	11	9	91
2. Junior Officers and Supervisors ..	16	98	114	13	86
3. Workmen ..	1,718	569	2,287	75	25
4. Menials and unskilled labourers ..	638	571	1,209	53	47
5. Clerks .. ..	378	64	442	68	14
Total ..	2,751	1,312	4,063	68	32

## XIV.—Paint, Colour and Varnish Works.

### Introductory.

1. There are eight paint, colour and varnish works in Bengal—all located in the districts of 24-Parganas and Howrah and within a few miles of Calcutta. Some of these factories are rather small and specialise in only one item, e.g., paints or dry colours or varnish, while others are pretty big concerns employing as many as 400 to 500 men each. The eight factories in this class provide employment to over 1,700 men of whom, however, only 40 per cent. are Bengalis.

### An analysis of the Table.

2. The Table at the end shows that of the 1,714 employees in the eight paint, colour and varnish works in Bengal, as many as 1,024 (or 60 per cent.) are non-Bengalis. Analysing the figures further, we see that while most of the officers are non-Bengalis (as a matter of fact, most of them are Europeans as many of the paints and varnish factories are either owned or managed by Europeans), there is an appreciable element (54 per cent.) of Bengalis in the grade of chemists and technical experts. Sixty per cent. of the skilled workmen and seventy-four per cent. of the unskilled labourers and coolies are, however, non-Bengalis.

### Qualifications and remunerations of employees.

3. Officers are mostly persons in executive charge of a factory: they consist of managers and their assistants. Generally, they are all qualified chemists and, in addition, they know how to control subordinates and handle labour in a factory. Their pay ranges from Rs. 250 to Rs. 1,500 per month.

4. Chemists and technical experts (including engineers) form the backbone of the paints and varnish industry. Generally, they are B.Sc.'s in Chemistry of an approved university, but there are a few men who are not fully qualified graduates, but at the same time have made reasonably comprehensive studies in Chemistry. They all have got their practical training either in the factory in which they now work or in some other paints or varnish factory. Their pay ranges from Rs. 100 to Rs. 500 per month.

5. Skilled workmen are a very important group of employees in this industry. Generally speaking, they possess no theoretical knowledge of Chemistry, but they all have a certain amount of skill and keenness (and a suitable physique) and these, coupled with practical experience of the various stages of the manufacturing process they have gradually acquired, make them very good workmen indeed. Their pay ranges from Rs. 25 to Rs. 100 per month.

6. Unskilled labourers and coolies do hard manual work involving little or no skill. Their pay ranges from Rs. 15 to Rs. 25 per month.

### Where the requisite training can be had.

7. There is no regular apprenticeship system in any of the factories in Bengal, but most of the larger ones offer regular opportunities to promising graduates in Chemistry of approved universities to become learners and to qualify for permanent positions in the laboratory or production departments. For this purpose, a degree in Applied or Industrial Chemistry is preferred to one in Theoretical Chemistry.

8. Workmen need not be graduates at all, but it is desirable that they should have some basic general education (a Matriculation certificate is adequate for this purpose) and should also have keenness and intelligence. As, however, the wages offered to skilled workmen are quite decent, even science graduates may seek employment as workmen.

9. Those who are more ambitious should go abroad for special technological training. Some firms in Great Britain take in non-British apprentices on payment of a heavy premium and this can be arranged through the High Commissioner for India in London. On the other hand, those who want to get training in British universities or technical colleges should have a degree of an Indian university in Applied or Industrial Chemistry. There is a course in Industrial Chemistry at the Battersea Polytechnic, London, and there is a Works Chemists' course at the Northern Polytechnic, Holloway, London. The three-year technological course of the University of Manchester also includes training in Applied Chemistry, Chemical Engineering, Electro-chemistry, colouring matters and photography.

### The future.

10. From the figures given it would appear that paint, colour and varnish works have so far failed to attract an appreciable number of Bengali employees. It is alleged by the managers of these factories that Bengalis, particularly of the educated classes, have not yet been able to give up their prejudice about manual labour. It seems, however, that Bengali youths do not know sufficiently well the various amenities that employees in these factories enjoy, in addition to the very liberal pay they receive. In most factories, the company itself provides decent accommodation to its employees and free qualified medical attention is also given. In some factories, employees drawing more than a certain minimum amount per month are allowed to participate in the benefits of a Provident Fund and most employees in the grade of workmen and above get either tea-money or Sunday allowances. Some companies pay extra wages when employees in the grade of workmen and unskilled labourers have to stay in the factory longer than the prescribed period of 8 to 9 hours. Moreover, work in a paint, colour and varnish workshop is by no means extra hard, although it is obvious that manual labour is involved and one has to dirty one's hands rather too often. If our educated young men would only shake off their prejudices and take a more rational view of things they would find that quite decent employment can be had as skilled workmen, chemists or technical experts in the paint, colour and varnish factories in Bengal.

TABLE.

## Employment in Paint, Colour and Varnish Works.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Officers .. ..	6	33	39	15	85
2. Chemists and Technical experts .. ..	53	46	99	54	46
3. Skilled workmen ..	271	413	684	40	60
4. Unskilled labourers and coolies .. ..	188	525	713	26	74
5. Clerks .. ..	172	7	179	96	4
Total ..	690	1,025	1,714	40	60

## XV.—Chemical and Pharmaceutical Works.

### Introductory.

1. In recent years chemical and pharmaceutical works have grown up in large numbers all over the province and at the present moment there are 19 factories at work which come under the purview of the Indian Factories Act. Besides these 19 factories, there are a number of small concerns here and there, but as they mostly cater for local needs and are conducted more or less on a family basis, they do not offer much scope for employment to outsiders. The nineteen large factories at work employ nearly 5,500 men, a majority of whom are Bengalis.

### An analysis of the Table.

2. The Table at the end shows that of the 5,475 employees in the 19 chemical and pharmaceutical works in Bengal as many as 3,264 (or 60 per cent.) are Bengalis and the rest are non-Bengalis. Analysing the figures further, we find that non-Bengalis preponderate only in the grade of unskilled workmen and menials (they form 35 per cent. of the total in this grade) and that, in all other grades, the percentage of Bengalis ranges from 79 to 91 per cent.

### Qualifications and remunerations of employees.

3. Officers and technical experts form the back-bone of a chemical and pharmaceutical works. They are mostly graduates in science (Chemistry), Medicine or Engineering and many of them possess, in addition, practical technical knowledge obtained in factories. Their pay ranges from Rs. 75 to Rs. 500 per month.

4. Next in importance come skilled workmen. They need not necessarily possess any theoretical knowledge of Chemistry or Engineering, but some acquaintanceship with the principles of Pharmaceutical or Applied Chemistry is an advantage. They are generally selected out of the ordinary working class (coolies) as a result of their special efficiency in the particular branch of work in which they are employed. Their pay ranges from Rs. 25 to Rs. 75 per month.

5. Coolies and menials need not possess any skill. All that is required of them is that they should be of strong physique and willing to do any type of work they are called upon to do. Their remuneration ranges from Rs. 12 to Rs. 30 per month.

### The future and prospects of further employment of Bengalis.

6. As the figures show, except in the grade of coolies and menials, Bengalis are well-represented on the employment roll of the various chemical and pharmaceutical works in Bengal and it cannot, therefore, be said that prospects of further employment of Bengalis in this industry are very bright. It may, however, be pointed out that most of the

Bengali employees in the grade of skilled workmen belong to the illiterate artisan class and *bhadralog* young men with school or college education can easily find employment in this grade provided they are prepared to work as ordinary workmen and do the necessary manual labour involved in the various stages of the manufacturing process.

7. Those who aspire to become technical experts and officers should possess a good degree in Applied or Pharmaceutical Chemistry, Medicine or Engineering. Almost all the universities in India offer facilities for specialising in all or some of these courses.

8. Those who are more ambitious may go abroad. Applied Chemistry in all its aspects is taught excellently in some of the British Universities like Sheffield, Manchester, Liverpool and Edinburgh. In addition, a science (Chemistry) graduate of an Indian university may qualify for the final examination of the Pharmaceutical Society of Great Britain. A candidate has to serve as an articled pupil with a pharmacist in Great Britain for a period of three years, during which period he has to undergo practical course of study in accordance with rules prescribed in the examination regulations. Generally, payment of premium is not required, but in some cases the pupil may be required to pay a small premium of, say, £50. Courses in Pharmacology and Pharmacy may also be had at the Universities of Glasgow, London, Manchester and Nottingham and at the Chelsea Polytechnic, London, and Welsh National School of Medicine, Cardiff.

TABLE.

## Employment in Chemical and Pharmaceutical Works.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Officers and technical experts ..	284	28	312	91	9
2. Skilled workmen ..	1,432	383	1,815	79	21
3. Unskilled workmen and menials ..	907	1,699	2,606	35	65
4. Clerks and salesmen ..	641	101	742	86	14
Total ..	3,264	2,211	5,475	60	40

## XVI.—Soap Works.

### Introductory.

1. There are over a dozen large soap factories at work in Bengal and between them they give employment to over 1,100 people. More than half the employees are Bengalis.

2. In addition, there are innumerable small concerns all over the province engaged in the manufacture of washing soap and crude varieties of toilet soap. The productive capacity of these concerns is extremely limited: they cater for local needs only and in most cases their average output does not exceed 10 mds. a year. In certain cases, production is carried on for purely domestic consumption. In the present survey of employment in soap works, figures of employees in these small concerns have been omitted as, generally speaking, they are run on a family basis and do not offer much scope of employment to outsiders.

### An analysis of the Table.

3. The Table at the end which comprises figures of employees in such soap works as come under the purview of the Indian Factories Act shows that of the 1,120 employees, 52 per cent. are Bengalis and the rest are non-Bengalis. Analysing the figures further, we find that non-Bengalis predominate mostly in the grade of coolies and menials and that, in all other grades, the percentage of Bengalis is fairly high, ranging from 68 per cent. in the grade of skilled workers to 91 per cent. in the grade of clerks.

### Qualifications and remunerations of employees.

4. Managers and officers are generally persons who have practical experience of running a factory. In addition, officers possess a high degree of technical knowledge, particularly in Applied Chemistry. Their pay ranges from Rs. 150 to Rs. 1,000 per month.

5. Technical experts form the backbone of a soap factory. They are generally chemists and engineers possessing university qualifications (a science or an engineering degree), backed by practical technical knowledge obtained in factories. Their pay ranges from Rs. 75 to Rs. 500 per month.

6. Skilled workers need not necessarily possess any theoretical knowledge of Chemistry or Engineering, but some acquaintanceship with the principles or methods of soap-making is an advantage. They are generally selected out of the ordinary working class (coolies) as a result of their special efficiency in the particular branch of work in which they are employed. The soap boiling department is by far the most important department in a soap factory, work here requiring skill as well as physical labour and Bengalis are generally unwilling to work in this department. The remuneration of skilled workers varies from Rs. 20 to Rs. 60 per month.



7. Coolies and menials need not possess any skill. All that is required of them is that they should be of strong physique and willing to do any type of work they are asked to. Their remuneration ranges from Rs. 12 to Rs. 25 per month.

#### **The future and prospects of further employment of Bengalis.**

8. As the figures show, except in the grade of coolies and menials, Bengalis are fairly well represented on the employment roll of soap factories in Bengal and it cannot, therefore, be said that prospects of further employment of Bengalis, are very bright. It may, however, be pointed out that most of the Bengali employees in the grade of skilled workers belong to the illiterate artisan class and *bhadralog* youngmen with school or college education can easily find employment in this grade provided they are prepared to work as ordinary workers and do the necessary manual labour involved in the various stages of the manufacturing process.

9. Those who aspire to become technical experts and officers should possess a good degree in Applied Chemistry either of the University of Calcutta or of the University of Benares. The Department of Industries, Government of Bengal, also gives training in soap manufacture to a number of young men every year.

10. Those who are more ambitious may go abroad. Facilities for practical training in soap works in England are difficult to obtain, but small manufacturers are sometimes willing to provide facilities on payment of a premium. Details may be negotiated through the High Commissioner for India in London.

TABLE.

## Employment in Soap Works.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Managers and Officers	31	6	37	84	16
2. Technical experts ..	55	15	70	79	21
3. Skilled workers ..	184	86	270	68	32
4. Coolies and menials ..	243	423	666	36	64
5. Clerks ..	70	7	77	91	9
Total ..	583	537	1,120	52	48

## XVII.—Kerosene and Petrol Installations.

### Introductory.

1. There are eight large Kerosene and petrol installations with four sub-stations in Bengal and they provide employment to nearly 2,000 men.

### An analysis of the Table.

2. The Table at the end shows that of the 1,880 employees in the Kerosene and petrol installations in Bengal, 1,072 (or 57 per cent.) are Bengalis and the rest (or 43 per cent.) are non-Bengalis. Analysing the figures further, we see that non-Bengalis preponderate in the grade of unskilled workers and menials, forming 64 per cent. of the total number of employees in that grade. Bengalis are, however, fairly well represented in the grades of supervisors, and mechanics and skilled workers, forming 66 and 76 per cent. of the total respectively. Superintendents and Assistant Superintendents are mostly Europeans, Americans or Anglo-Indians, mainly because all the Kerosene and petrol installations belong to big European or American oil companies and naturally the latter want to have men trained in their own countries at the head of the installations.

### Qualifications and remunerations of employees.

3. Superintendents and Assistant Superintendents possess engineering qualifications plus experience. Most of them have had their training in Great Britain or the United States of America. Their pay ranges from Rs. 250 to Rs. 1,000 per month.

4. Supervisors possess practical experience of mechanical engineering and know how to handle labour. Their pay ranges from Rs. 50 to Rs. 200 per month.

5. Mechanics and skilled workers are generally men promoted from the rank of unskilled workers and menials. They possess mechanical knowledge for the particular class of work with which they are entrusted and are either skilled or semi-skilled. Some of them received fixed monthly salaries—others are employed on daily wages basis. Their remuneration varies from Rs. 25 to Rs. 100 per month.

6. Finally come unskilled workers and menials—people with good physique but little brains. Their remuneration varies from Rs. 12 to Rs. 25 per month.

### The future and prospects of further employment of Bengalis.

7. As the figures show, Bengalis are fairly well represented both in the grade of supervisors and in the grade of mechanics and skilled workers. Most of the Bengali employees, however, come from the rank of ordinary artisans and coolies: very few of them are persons with school or college education. As the pays offered are by no means unattractive, there is no reason why Bengali young men who have passed out of schools and colleges should not seek a career in these employments. Superintendents and Assistant Superintendents are quite willing to give chances to educated lads, provided they are prepared to do the necessary manual labour and also to work with their hand.

TABLE.

## Employment in Kerosene and Petrol Installations.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Superintendents and Assistant Superintendents ..	3	25	28	11	89
2. Supervisors ..	64	33	97	66	34
3. Mechanics and skilled workers ..	515	167	682	76	24
4. Unskilled workers and menials ..	312	557	869	36	64
5. Clerks ..	178	26	204	87	13
Total ..	1,072	808	1,880	57	43

## XVIII.—Fan and Electric Works.

### Introductory.

1. There are twelve fan and electric works in Bengal and between them they employ nearly 1,600 men. A majority of the employees (75 per cent.) are Bengalis.

### An analysis of the Table.

2. The Table at the end shows that it is only in the grade of managers and officers and of coolies and menials that the proportion of non-Bengalis is greater than that of Bengalis. In the former grade, non-Bengalis constitute 54 per cent. of the employees and are mostly Europeans. This has been so because a majority of the fan and electric works are owned or managed by European firms and also because there are not many Bengalis who possess specialised knowledge of the processes of manufacture of fans, lamps and other electrical accessories. In the grade of coolies and menials, non-Bengalis predominate (they constitute 65 per cent. of the total of this grade) because Bengalis are not generally strong and hardy enough to be employed in these categories. In the grades of supervisors and workmen, however, Bengalis constitute 77 and 85 per cent. of the total respectively.

### Qualifications and remunerations of employees.

3. Managers and officers are usually mechanical and/or electrical engineers and also possess practical knowledge of the technique of manufacture. Their pay ranges from Rs. 200 to Rs. 1,500 per month.

4. Supervisors or Foremen, as they are sometimes called in some factories, also possess knowledge of mechanical and/or electrical engineering, but their knowledge is generally more practical than theoretical. In most cases they are men who have risen from the rank of workmen. Their pay ranges from Rs. 70 to Rs. 200 per month.

5. Workmen constitute the most important section of employees. They are persons with some school education who have been trained in the art of manufacture of fans, lamps and electrical accessories. Workmen are sometimes paid on piece-work basis. Their remuneration ranges from Rs. 20 to Rs. 60 per month. Coolies and menials get pay ranging from Rs. 12 to Rs. 25 per month.

### The future and prospects of further employment of Bengalis.

6. As the figures show, Bengalis are fairly decently represented on the employment roll of fan and electric works, and prospects of further absorption of Bengalis are limited. It may be noted, however, that the number of factories manufacturing these articles is on the increase and this industry will, therefore, be able to absorb more men in the near future. Secondly, as far as Bengali young men of the *bhadralog* classes are concerned, fan, lamp and electric works may still offer opportunities of employment to them. Many of the present Bengali employees are illiterate or semi-literate and come from the ordinary artisan class. If in the near future educated young Bengalis would come forward to work as ordinary mistris, they would find that many employers are willing to give them preference over illiterate and semi-literate workmen.

TABLE.

## Employment in Fan and Electric Works.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
Managers and Officers ..	12	14	26	46	54
Supervisors ..	17	5	22	77	23
Workmen ..	978	179	1,157	85	15
Coolies and menials ..	91	172	263	35	65
Clerks ..	81	26	107	76	24
Total ..	1,179	396	1,575	75	25

## XIX.—Match Factories.

### Introductory.

1. There are 15 match factories in Bengal providing employment to over 4,500 men. Of them only 35 per cent. are men of this province and the rest belong to other provinces.

### An analysis of the Table.

2. The Table at the end shows that except in the grade of clerks, non-Bengalis preponderate in all the grades. As officers and supervisors, they form 53 per cent. of the total, as technical experts 50 per cent. and as workmen 65 per cent. Although the industry is conducted on a cottage industry basis in some areas, most of the largest factories are in or round about Calcutta and it is in these areas that non-Bengali workers preponderate.

### Qualifications and remunerations of employees.

3. In the more important factories, officers and technical experts are generally persons who have had their training in Japan or Sweden, but in the lesser ones, they either do not possess any special qualifications or have been trained in some local match factory. The pay of employees of this grade varies from Rs. 50 to Rs. 400 per month.

4. Supervisors and workmen form the most important section of employees in a match factory. The former are usually men promoted from the rank of workmen. Workmen, on the other hand, need not possess any special technical qualifications: they are only expected to possess a certain amount of dexterity and skill. In some of the better class factories workmen and supervisors get pays ranging from Rs. 20 to Rs. 70 per month, but in the lesser factories the average is from Rs. 10 to Rs. 30 per month. Coolies and menials get wages ranging from Rs. 10 to Rs. 25 per month.

### The future and prospects of further employment of Bengalis.

5. As the figures show, there is considerable scope for the employment of Bengalis in the match factories of Bengal. Nearly 97 per cent. of the employees, however, belong to the grades of workmen and coolies and menials, and so far Bengalis have not cared for these types of work, although the wages that can be secured are pretty decent. Work in a match factory is of course a bit monotonous, but that should not deter Bengalis from seeking their livelihood there. Moreover, as a certain degree of skill is required, match factories offer great opportunities to young lads of the *bhadralog* classes who have just passed out of their schools. No proof of special previous training is demanded except of those who aspire to become officers or technical experts.

**Employment in Match Factories.**

	Bengalis.	Non-Bengalis.	Total.	Percent- age of Bengalis.	Percent- age of non- Bengalis.
Officers and Supervisors ..	25	28	53	43	53
Technical Experts ..	17	17	34	50	50
Workmen ..	1,361	2,543	3,904	35	65
Coolies and menials ..	131	377	508	26	74
Clerks ..	62	13	75	83	17
Total ..	1,596	2,978	4,574	35	65



## XX.—General Engineering Workshops.

### Introductory.

1. There are over 160 general engineering workshops in Bengal, but of them only about 50 are of any major importance, the rest being mostly petty engineering workshops. Of these 50 large engineering establishments, 30 are affiliated to the Indian Engineering Association. General engineering workshops offer scope of employment to a very large number of people, employing over 35½ thousand men in Bengal alone. Of these 35½ thousand employees, nearly 20 thousand (56 per cent.) are Bengalis and the remaining 15½ thousand (44 per cent.) are non-Bengalis.

### An analysis of the Table.

2. The Table at the end shows the number and percentage of Bengalis and non-Bengalis employed in the various grades. The number of Bengali managers and covenanted officers as also of uncovenanted officers and foremen is conspicuously low—being only 16 and 18 per cent., respectively, of the total. There are, however, 66 per cent. of Bengali subordinate supervisors and assistant foremen, 73 per cent. of Bengali charge-hands and skilled workers, and 67 per cent. of Bengali semi-skilled workers. A considerable majority (76 per cent.) of unskilled workers and menials are, however, non-Bengalis.

### Qualifications and remunerations of employees.

3. In all European firms and in many Indian firms, managers and covenanted officers are mostly Europeans or Anglo-Indians. Generally, they have had training in Engineering in Great Britain or on the Continent. This training is invariably both theoretical and practical. In other words, those who occupy key positions as managers and covenanted officers must not only possess the appropriate degree, diploma or certificate in engineering, but must also have had intensive practical training in big engineering workshops. The pay of managers and covenanted officers varies from Rs. 500 to Rs. 3,000 per month, according to the size and importance of the firm.

4. Next come uncovenanted officers and foremen. In this grade also, the number of Bengalis is rather small and quite a number of posts are held by Europeans or Anglo-Indians. The qualifications of uncovenanted officers and foremen are more practical than theoretical: they are mostly such engineers as have started as subordinate supervisors or assistant foremen and worked their way up by sheer perseverance and industry. Their pay varies from Rs. 250 to Rs. 800 per month.

5. The lowest rung in the ladder of engineers is occupied by subordinate supervisors and assistant foremen. In this grade the percentage of Bengalis is not so unsatisfactory. Here also the qualifications required are more practical than theoretical, but among the Bengali

employees quite a large number of degree or diploma holders in engineering are found. Preference is, however, always given to those who have a considerable amount of practical experience, may be in addition to their theoretical degree or diploma. The pay in this grade varies from Rs. 75 to Rs. 500 per month.

6. The remaining employees are not proper engineers: they are mainly persons who have had some workshop, foundry or machine-shop experience. Charge hands and skilled workers generally start their apprenticeship at a young age (usually immediately after having passed the Matriculation or Junior Cambridge) and when they have learnt some work and become useful to their firm, they are given an allowance. As they become more and more experienced, they get promoted to the permanent employment roll. Their pay varies from Rs. 30 to Rs. 150 per month.

7. Semi-skilled workers are generally recruited from the rank of actual *mistris* and coolies; so also are unskilled workers. They have to do most of the heavy manual work in an engineering firm and are mostly illiterate. The pay of the former varies from Rs. 20 to Rs. 40 per month and that of the latter from Rs. 12 to Rs. 25 per month.

#### **Where the requisite training can be had.**

8. For those posts which are occupied by properly qualified engineers, a basic educational qualification in Science is necessary. An I.Sc. or B.Sc. has then to decide in which branch of engineering he wants to qualify, as conditions of academic or professional training differ substantially in the various branches. Roughly speaking, there are six main branches of engineering—(a) civil, (b) municipal, (c) mechanical, (d) automobile, (e) electrical and (f) mining. In India, instruction in civil, mechanical and electrical engineering is given at the Colleges of Engineering at Roorkee and Sibpur and also at the School of Engineering at Dacca. There are also a number of non-official institutions in Bengal which impart instruction in some branches of engineering. Of them the best reputed is the Jadavpur College of Engineering and Technology in the 24-Parganas district. The full course in any branch of engineering is never less than three to four years.

9. Those who are more ambitious and can afford it are advised to go abroad for engineering qualifications. There are innumerable institutions in Great Britain where one can get theoretical training in any of the six branches of engineering enumerated above. Mention may be made particularly of (a) the Faculties of Engineering and Technology in the Universities of London, Manchester, Bristol, Durham, Leeds, Liverpool, Sheffield, Glasgow and Edinburgh, (b) the Faraday House, London, (c) the College of Aeronautical Engineering, London, and (d) the Royal School of Mines, London. The course is never less than three to four years.

10. The most important point to remember about all these engineering courses is that, unless supplemented by a period of intensive practical training, merely a theoretical degree or diploma has little market value. Thus all Civil Engineers must undergo a practical field course in surveying and also have practical training in railways or on public works; Municipal Engineers must have practical training under a Borough Engineer or under an Urban or Rural or County Surveyor

in England even on payment of a premium; Mechanical Engineers must get practical training in locomotive, constructional or structural workshops; Automobile Engineers must have knowledge of actual repairs and garage work; Electrical Engineers must learn practical work in a power station or in a heavy electrical undertaking; and Mining Engineers must supplement their theoretical knowledge by practical experience of work in mines.

11. Those whose ambition extends only to the holding of such posts as charge-hands, skilled workers and subordinate supervisors need not have a regular degree or diploma in engineering, but it is desirable that they also should have some theoretical knowledge. This theoretical knowledge may be acquired in the various recognised engineering institutions in India and also in some of the private engineering schools and colleges. More important than this theoretical training is, however, a prolonged period of practical training as an apprentice in a good engineering workshop or on the Railways or Port Trusts. Recruitment for this purpose is made by engineering workshops, Railways and Port Trusts from time to time and it is important to remember that as the work is arduous, good physique is considered essential.

### The future.

12. General engineering workshops are now-a-days attracting a much larger number of educated Bengalis than before and the probabilities are that this tendency will be maintained. The number of Bengalis employed is, however, still far from satisfactory and it is desirable that more and more Bengali young men should try to get that complete engineering training, both theoretical and practical, which would qualify them for jobs in engineering workshops. Particular stress should be laid on practical training, as Bengali young men have been found to be rather deficient in this respect. No amount of degrees or diplomas can help if a candidate is unable to show that he has had at least three to four years' intensive *practical* experience in that branch of engineering in which he claims to be proficient.

TABLE.

## Employment in General Engineering Firms and Workshops.

	Number of Bengalis.	Number of non-Bengalis.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Managers and Covenanted officers	32	167	16	84
2. Uncovenanted officers and foremen	65	288	18	82
3. Subordinate supervisors and assistant foremen ..	305	159	66	34
4. Chargehands and skilled workers	9,887	3,720	73	27
5. Semi-skilled workers ..	5,823	2,917	67	33
6. Unskilled workers and menials ..	2,787	8,317	24	76
7. Clerks .. ..	1,037	201	84	16
Total ..	19,936	15,769	56	44

## XXI.—Iron and Steel Works.

### Introductory.

1. The only iron and steel works of importance in this province are the works of the Indian Iron and Steel Company at Kulti and Hirapur in the Burdwan district. The iron and steel works of the Tata Iron and Steel Company, Limited, are situated in Bihar and hence, although they give employment to a large number of Bengalis, conditions of employment and apprenticeship there are not described here.

### Apprenticeship Schema.

2. Three classes of apprentices are trained at the iron and steel works of the Indian Iron and Steel Company—"A", "B" and "C".

3. "A" Class apprentices must possess the B.Sc. degree or its equivalent and must be below 25 years of age. The training period is 3 years and the remuneration given is Rs. 30—5—40. Training is offered in General Engineering, Foundry, Electrical Engineering, Blast Furnace and Coke Ovens.

4. "B" Class apprentices include students who have passed the Matriculation examination and the age limit is up to 20 years. The training period is 5 years and the remuneration ranges from Rs. 15 per month in the first year to Rs. 30 per month in the final year. Training is offered in General Engineering, Foundry and Electrical Engineering only.

5. "C" Class apprentices or "helpers" are comprised exclusively of youths residing in the iron and steel works area whose parents or guardians are employees of the works. The age limit is between 15 and 17 years. The training period is 5 years and the remuneration ranges from annas 6 per day in the first year to annas 12 per day in the final year.

6. Approximately, about 75 apprentices are taken every year, 25 in each class. Applicants have to apply on a prescribed form and to pass a test of physical fitness.

### Prospects of future employment.

7. No guarantee of employment after the completion of the prescribed course is given, but each case is carefully considered on individual merit for inclusion in the Employment Register of the Company. Certificates are given to all apprentices completing their period of training to the satisfaction of the Management.

8. Those of the "A" and "B" Class apprentices who show promise may be permitted, after completion of their training course, to serve a further period of one year as Improvers. Electrical Engineering apprentices must qualify for and obtain an Electrical Workman's Permit before application for an Improvership can be considered.

Improvership does not, however, imply any obligation on the part of the Company to provide employment on the regular staff and Improvers are, in the ordinary course, required to leave the works after the prescribed period unless the Management have suitable vacancies to offer. The minimum salaries of Improvers are Rs. 50 per month for "A" Class and Rs. 40 per month for "B" Class. "C" Class apprentices may, at the discretion of the Company, be taken on as Tradesmen after completion of their training course as and when vacancies occur on wages agreed upon at the time of appointment.

9. Although no guarantee of employment is given to apprentices, the training is so thorough and practical that young men who have gone through the prescribed course and received the appropriate certificate, seldom remain unemployed. They can, with a little effort, easily secure jobs as engineers, supervisors or mechanics in other engineering workshops or firms, even if they are not lucky enough to get employment in the very company in which they have had their training.

## XXII.—Electric Supply Companies.

### Introductory.

1. There are a dozen electric supply companies working in Bengal and they employ over 5,200 people. Of these, the Calcutta Electric Supply Corporation is by far the largest and most important, it alone employing nearly 4,000 people. This number of persons employed in electric supply companies is likely to increase considerably in the near future with the progressive electrification of urban and rural areas in Bengal.

2. The Table at the end relates to the twelve electric supply undertakings in Bengal including the Calcutta Electric Supply Corporation. We see that the total number of employees in these companies is over 5,200 and of these nearly 1,800 (34 per cent.) are Bengalis and over 3,400 (66 per cent.) are non-Bengalis.

### An analysis of the Table.

3. The two most important departments in an electric supply undertaking are: (a) the generating stations and sub-stations, and (b) the mains and testing departments. In these two departments the percentage of Bengalis is only 49 and 13 and the rest are all non-Bengalis. As a matter of fact, nearly 50 per cent. of the *mistris* and skilled labourers in these two departments are non-Bengalis and unskilled coolies and menials are almost hundred per cent. non-Bengalis.

4. In the stores, workshops and construction department, too, most of the employees (83 per cent.) happen to be non-Bengalis. In the general establishment, on the other hand, where clerks, draftsman, meter readers and meter inspectors preponderate, quite a decent percentage (68 per cent.) of the employees are Bengalis.

### Qualifications and remunerations of employees.

5. We may start with the highest officials—Superintendents, Senior Engineers, Managers and Executive Officers. Quite a decent percentage of these employees happen to be Europeans or Anglo-Indians. This is partly due to the fact that the more important electrical undertakings in Bengal are under European control and management and naturally the policy of having European officials in the key-posts is pursued by the head offices of these companies. Another reason why Indians are not employed to a larger extent is that in the key-posts must be placed men with very high technical qualifications and also with practical experience of such undertakings, and Indians with such qualifications cannot always be found. Nevertheless, it may be noted that the policy of all electrical undertakings, Indian or otherwise, is now to take in more and more superior officers from amongst Indians and it may safely be prophesied that in another decade the

percentage of Europeans in the higher grades will diminish appreciably. The pay of these officers varies from Rs. 400 to Rs. 2,000 per month.

6. It is from the grade of Junior Engineers that most Superintendents, Senior Engineers and Executive Officers of an electric undertaking are recruited. Junior Engineers must possess high practical and technical training in the mechanism of boilers, electrical plant and machinery, switchgear converters, transformers, etc. They must also possess ability to direct operations and control staff. Junior Engineers receive pay varying from Rs. 200 to Rs. 750 per month.

7. Switchboard attendants must possess a practical knowledge of the electrical operation of switchboards. Generally speaking, graduates in science and electrical engineering are preferred for these posts, but even they have to go through a period of practical training before they can be of service to the company. The pay of switchboard attendants varies from Rs. 30 to Rs. 150 per month.

8. Jointers, foremen, overseers, repairers, etc., must have good general education and considerable experience of jointing and plumbing work and also of electrical and mechanical engineering. The pay of this class of employees varies from Rs. 40 to Rs. 500 per month.

9. Mistris and skilled labourers in the various departments of an electrical undertaking should have practical experience as draftsmen and ability to use implements and tools. In most cases they start as unskilled labourers and after several years' training they are classified as mistris or skilled labourers. The pay of this class of employees ranges from Rs. 30 to Rs. 150 per month.

10. In the general establishment, clerks, canvassers and junior assistants should have a sound general education at least up to the Matriculation standard and should be able to speak and write English fluently. The senior appointments are generally filled by those who have proved their efficiency in the lower grades and who have strong personality and ability to control staff and interview consumers. The pay of clerks, canvassers and junior assistants ranges from Rs. 50 to Rs. 250 per month and that of senior assistants and chief clerks ranges from Rs. 200 to Rs. 500 per month.

11. Meter readers and meter inspectors should be smart and energetic persons and should have a good general knowledge up to the Matriculation standard. An elementary knowledge of electricity is an advantage. The pay of meter readers and meter inspectors varies from Rs. 20 to Rs. 300 per month.

#### **Some general observations on prospects of further employment of Bengalis.**

12. As the Table shows, there is scope for employment of a large number of Bengalis in the electrical undertakings of Bengal. One important reason why Bengalis form only 34 per cent. of the total number of employees is that Bengali mechanics are not, as a rule, as skilled as mechanics from other provinces. Moreover, it is frequently stated by employers that Bengalis are less industrious, thus requiring more supervision. Furthermore, the nature of work in an electrical



undertaking often requires employees to carry out oily and dirty tasks and the average Bengali middle class youth has not hitherto taken kindly to this type of work. In recent years, however, the outlook of educated Bengali lads has changed tremendously and the attitude of employers now appears to be the main obstacle in the path of further employment of Bengalis.

#### **Courses of training for Bengali young men.**

13. As has been noted already, the most important pre-requisite for getting employment in an electrical undertaking (save in the clerical grades) is ability and willingness to do all types of manual work. Next to this, one should have commonsense and good general education, say, up to the Matriculation standard. Then one should have a knowledge of the principles of electricity and also have had some practical training in some mechanical workshop or technical school. With these qualifications a Bengali young man can secure employment as an ordinary mistri or mechanic.

14. For the higher posts a degree in science or engineering with special training in electricity is helpful. But more important than a degree is practical experience either with companies manufacturing electrical plant and machinery or at generating stations in India or abroad. The Faraday House in London and the more important universities in Great Britain have good courses in electrical engineering, but the Faraday House diploma or the university degree should invariably be supplemented by at least two years' apprenticeship in a manufacturing electrical engineering works, appropriate to that branch of the profession in which a career is sought.

TABLE.

## Employment in Electric Supply Companies.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
<i>I.—Generating Stations and Sub-Stations.</i>					
Superintendents and Senior Engineers ..	9	29	38	24	76
Junior Engineers ..	39	18	57	68	32
Switchboard Attendants ..	306	7	313	98	2
Mistris and skilled labourers ..	388	107	495	78	22
Unskilled coolies and menials ..	175	784	959	18	82
	917	945	1,862	49	51
<i>II.—Mains and Testing Departments.</i>					
Superintendents and Senior Engineers ..	8	22	30	27	73
Jointers, Foremen, Repairers, etc. ..	64	46	110	58	42
Mistris and skilled labourers ..	121	297	418	29	71
Unskilled coolies and menials ..	88	1,597	1,685	5	95
Total ..	281	1,962	2,243	13	87
<i>III.—Stores and Workshops and Construction Departments.</i>					
Superintendents and Engineers ..	1	9	10	10	90
Overseers and Foremen ..	8	2	10	80	20
Mistris and skilled labourers ..	47	68	115	41	59
Unskilled labourers and menials ..	8	224	232	3	97
Total ..	64	303	367	17	83
<i>IV.—General Establishment.</i>					
Managers and Executive Officers ..	11	20	31	32	68
Senior Assistants and Chief clerks ..	1	2	3	33	67
Clerks and Draftsmen ..	378	25	403	94	6
Meter Readers and Meter Inspectors ..	75	23	97	77	23
Menials ..	32	144	176	18	82
Skilled labourers ..	15	29	44	34	66
Total ..	512	242	754	68	32
GRAND TOTAL ..	1,774	3,452	5,226	34	66

## XXIII.—Silk Mills.

### Introductory.

1. Although before the coming of the economic transition the silk products of Bengal enjoyed an India-wide fame, during the last half a century or so the silk industry in Bengal has been more or less in a moribund condition, mainly due to Japanese competition and the absence of proper co-operation between growers, manufacturers and sellers. In recent years, however, attempts have been made to manufacture artificial silk goods as well as real silk goods and at the moment there are six silk mills at work in Bengal. They provide employment to nearly 2,250 men of whom, however, as many as 75 per cent. happen to be non-Bengalis.

### An analysis of the Table.

2. The Table at the end shows that of the 2,248 employees in the various silk mills in Bengal, only 555 (or 25 per cent.) are Bengalis and the rest are all non-Bengalis. Among officers, Bengalis form 48 per cent. of the total, but among supervisors, operatives and unskilled coolies they form only 27, 24 and 23 per cent. of the total, respectively. Even in the grade of clerks, 65 per cent. happen to be non-Bengalis.

3. The main reason for this large preponderance of non-Bengalis is that almost all the mills are controlled by non-Bengalis and many of them have not yet tried to work their mills with the help of Bengali supervisors, operatives and workmen. Moreover, the spinning and weaving of silk, whether it is artificial or real, requires a greater degree of skill than the spinning and weaving of cotton, and many local workmen have not yet been able to adapt themselves to the requirements of silk mills. This does not mean that they are by nature unfitted to work in silk mills: on the other hand, enquiries show that either they have not been given proper opportunities of working in silk mills by employers thereof, or they have not interested themselves adequately in such work.

### Qualifications and remunerations of employees.

4. As in cotton mills, officers must be persons possessing administrative ability and must have a thorough knowledge of the technique and methods followed in their respective department. They must also know how to handle labour tactfully. Generally speaking, they should be persons who have had some previous technical training in a textile mill, a Government textile institute or an engineering firm. Their remuneration ranges from Rs. 75 to Rs. 500 per month.

5. Supervisors, on the other hand, are mostly promoted men from the rank of operatives and workmen. They must possess practical experience of the process of manufacture in the various departments of a silk mill. Their pay varies from Rs. 35 to Rs. 100 per month.

6. The most important section of employees is in the grade of operatives and workmen. They are mostly persons without any previous technical training, but some silk mill managers would like to have men who have been trained in a weaving school. The pay of operatives and workmen varies from Rs. 20 to Rs. 35 per month. Unskilled coolies and menials get pay varying from Rs. 10 to Rs. 25 per month.

#### **Prospects of further employment of Bengalis.**

7. The Table shows that there is considerable scope for the employment of a large number of Bengalis in the silk mills of Bengal. As has been already observed, work in a silk mill requires a greater degree of skill and efficiency than work in a cotton mill and so far Bengalis have not been able to adapt themselves to the requirements of the former. On the other hand, it is a fact that Bengalis are not by nature unfitted for this type of work and, with a little more of encouragement from employers, they can easily prove to be as good operatives and workmen as non-Bengalis. It is necessary, however, that existing residential barracks for workers and operatives should be improved before Bengali workers of the *bhadralog* classes can be attracted to employments offered by silk mills.

#### **Where the requisite training can be had.**

8. Bengali lads will have a better chance of securing employment in silk mills, if they get previous training in some cotton mill. They may also get trained in institutions like the Berhampore Silk Weaving Institute and the Bengal Textile Institute, Serampore. Those who are more ambitious may go for training to the Victoria Jubilee Technical Institute, Bombay, or to the Government Silk Mills, Mysore. Finally, the Municipal College of Technology, Manchester, and the silk institutes and factories of Japan and the United States of America provide excellent specialised training for those who seek career as experts, superior officers, managers and assistant managers.

TABLE.

## Employment in Silk Mills.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Officers .. ..	21	23	44	48	52
2. Supervisors ..	20	54	74	27	73
3. Operatives and workmen ..	332	1,035	1,367	24	76
4. Unskilled coolies and menials ..	173	564	737	23	77
5. Clerks .. ..	9	17	26	35	65
Total ..	555	1,693	2,248	25	75

## XXIV.—Sugar Mills.

### Introductory.

1. There are fourteen sugar mills in Bengal and between them they give employment to over 2,000 people. A large majority (56 per cent.) of these employees, however, happen, to be men who do not belong to this province.

### An analysis of the Table.

2. The Table at the end shows that of the 2,166 employees in the fourteen sugar mills of Bengal, only 947 (or 44 per cent.) are Bengalis and the rest are non-Bengalis. Analysing the figures department by department, we find that in the General Establishment 59 per cent. of the employees are non-Bengalis and in the Engineering and Manufacturing sections 53 and 59 per cent. respectively are non-Bengalis. Very few skilled operatives (29 per cent.) in the manufacturing section are Bengalis and even in the engineering section only 40 per cent. of the skilled mechanics belong to this province.

### Qualifications and remunerations of employees.

3. Employment in a sugar mill is casual employment for most employees, though some mills try to retain the services of all but menials and unskilled workmen throughout the year, on a partial wage system. As a rule, sugar mills in Bengal work for only four months, from December to March, and this is principally due to the fact that sugar-cane is not available at any other time of the year. In considering the remuneration of employees in sugar mills, therefore, this fact of employment continuing for only four months in the year should be taken into account. The permanent employees in all sugar mills are the Manager, the Chief Engineer, the Chief Chemist and a few skilled mechanics of the engineering section.

4. In the General Establishment, the Manager is the head of the show. He is paid anything between Rs. 200 and Rs. 700 per month. He is expected to ensure a steady supply of sugar-cane for the mill and also to have practical knowledge of marketing conditions.

5. Cane officers are casual employees, employed for the season only. They are expected to know practical agriculture with special reference to the cultivation of sugarcane, and to help the Manager in the matter of getting a steady supply of it. Their pay ranges from Rs. 30 to Rs. 75 per month.

6. In the engineering section, the Chief Engineer is expected to have a thorough knowledge of mechanical engineering and also to know how to handle machinery in a sugar mill. His pay varies from Rs. 150 to Rs. 450 per month.

7. Those mills which have supervisors in the engineering section pay them at the rate of Rs. 50 to Rs. 100 per month while skilled mechanics get paid at the rate of Rs. 25 to Rs. 50 per month.

8. In the manufacturing section, the Chief Chemist is either a graduate in Applied Chemistry or a diploma-holder of the Imperial Institute of Sugar Technology, Cawnpore. His pay varies from Rs. 150 to Rs. 450 per month. He is helped by a number of Assistant Chemists, usually graduates in Applied Chemistry, who are paid at rates varying from Rs. 50 to Rs. 100 per month.

9. In the manufacturing section, skilled operatives (panmen, etc.) are persons who have practical experience of sugar manufacture and who can determine at what precise stage the molasses are likely to crystallise into sugar. The work of a panman requires a considerable degree of practical skill and as such they are fairly highly paid. They get pay ranging from Rs. 30 to Rs. 80 per month.

#### **The future and prospects of further employment of Bengalis.**

10. The sugar industry being a seasonal industry, employment in it has never made a sufficient appeal to the young men of this province. On the other hand, unemployment among the so-called middle classes in Bengal is so acute that it does seem strange that they do not care to have even partial employment instead of sitting idle without any employment. As the figures show, there is still considerable scope for the employment of Bengalis in the sugar mills of Bengal and, as practically all employers are only too anxious to employ local men, the onus lies on Bengali young men to come forward and avail themselves of these opportunities.

#### **Where the requisite training can be had.**

11. Those who want to make a career in this line would do well to go in for the excellent training that is given at the Imperial Institute of Sugar Technology, Cawnpore. There are Associateship courses in Sugar Technology and Sugar Engineering for those who are B.Sc.'s in Science or Engineering and a Fellowship course for those who have got the Associateship diploma. In addition there are a Sugar Boilers' Certificate Course and also a number of short courses in such subjects as chemical control, pan-boiling, fuel and boiler control, bacteriology, statistics, etc. Those who are more ambitious may go in for high technological training to the Andoban Sugar School, Louisiana, U.S.A., or to the Imperial College of Tropical Agriculture, Trinidad.

TABLE.

## Employment in Sugar Mills.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
<i>I.—General Establishment.</i>					
Managers and Cane officers	53	59	112	47	53
Clerks .. ..	44	6	50	88	12
Menials .. ..	72	175	247	29	71
Total ..	169	240	409	41	59
<i>II.—Engineering Department.</i>					
Engineers and Supervisors	22	15	37	59	41
Skilled Mechanics ..	174	265	439	40	60
Unskilled workmen ..	281	258	539	52	48
Total ..	477	358	1,015	47	53
<i>III.—Manufacturing Department.</i>					
Chemists and Assistant Chemists .. ..	46	13	59	78	22
Skilled Operatives (panmen, etc.) ..	69	167	236	29	71
Unskilled workmen ..	186	261	447	42	58
Total ..	301	441	742	41	59
Grand Total ..	947	1,219	2,166	44	56



## XXV.—Hosiery Factories.

### Introductory.

1. According to the Bengal Hosiery Manufacturers' Association, there are about 400 hosiery factories in Bengal, including regular knitting, tailoring and socks factories. This figure includes both factories registered under the Factories Act and factories not so registered. The factories are distributed as follows:—

		Registered factories.	Unregistered factories.
In Calcutta, 24-Parganas and Howrah districts ..	..	30	191
In Pabna district .. .. .	..	8	89
In the rest of Bengal .. .. .	..	3	79
		41	359
Total ..		41	359

From figures privately collected by the Bengal Hosiery Manufacturers' Association and from surveys recently made by the Department of Industries, Government of Bengal, it appears that these 400 hosiery factories give employment to about 10,000 men. About 60 per cent. of these belong to the tailoring section, 21 per cent. to the knitting section and 15 per cent. to other sections. Over 95 per cent. of these employees are Bengalis. Non-Bengalis are employed mainly in the factories located in Calcutta and the two neighbouring districts of Howrah and 24-Parganas.

### Qualifications and remunerations of employees.

2. A hosiery factory has got four main departments—(a) knitting including winding, (b) bleaching and dyeing including drying and calendaring, (c) tailoring including cutting, seaming, etc., and (d) finishing including ironing, pressing, stamping, packing, etc. There are the following classes of employees—(a) officers including technical experts, (b) operatives, (c) apprentices, (d) coolies and (e) clerks and salesmen.

3. The manager of a hosiery factory must have a thorough knowledge of the working of various kinds of hosiery machinery. He must also be conversant with conditions of the trade and its seasonal demands. Supervisors and technical experts, on the other hand, need only have theoretical and practical knowledge of the machinery employed and of the various stages of the manufacturing process. Pay in this grade varies from Rs. 35 to Rs. 250 per month.

4. Operatives (by far the largest group of employees in a hosiery factory) must know how to handle knitting or other appropriate machines and must have speed and skill in doing their bit in the manufacture of a hosiery article. Operatives are frequently paid on a piece-rate basis. Their monthly wages comes to anything between Rs. 8 to Rs. 25 per month.

5. Apprentices are operatives "in making". They are ordinary lads without any special qualifications who are kept attached to a factory with a view to their eventually qualifying as operatives.

Apprentices are generally given a small pocket allowance only, varying from Rs. 5 to Rs. 15 per month.

6. Finally, there are clerks and salesmen. Clerks should be at least matriculates and salesmen must have experience of conditions in the hosiery market. Their pay varies from Rs. 20 to Rs. 50 per month.

#### **Some general observations on the hosiery industry of Bengal.**

7. In the opinion of many competent observers, the hosiery industry in this province has reached the saturation point and there is little room for further expansion. Cut-throat competition has also brought ruin to a number of small factories. This partly explains why the wages and pays of employees in this industry are so low. The recent War has also introduced a number of adverse circumstances. Owing to restricted supply and the sudden and continued rise of prices of some important materials (e.g., bleaching powder, knitting needles and hosiery yarns), many factories have had to curtail production and quite a number of operatives and apprentices have been thrown out of employment. Tailoring factories have been particularly hard hit, because they have to depend on a regular supply of knitted fabrics and if this supply is not forthcoming, they have to remain practically idle.

#### **Prospects of further employment of Bengalis.**

8. It would thus appear that there is not much chance of further employment of Bengalis in the hosiery industry. Of course, it is still possible for educated lads to replace illiterate operatives of the artisan classes, but until the condition of the industry as a whole improves, wages will remain low and educated lads will not feel sufficiently tempted to try their luck in it.

## XXVI.—Tea Estates.

### Introductory.

1. Next to jute, the tea industry is the most important industry in Bengal. There are nearly 300 tea estates within the province, giving employment, both permanent and seasonal, to over 90 thousand men and women. According to the figures submitted by the various tea estates, about 95 per cent. of these employees are non-Bengalis, but at least 75 per cent. of these so-called non-Bengalis are hill men and hill women who may be called Bengalis in as much as they are permanently resident in this province. The chief tea-growing areas in Bengal are Darjeeling, the Terai and the Dooars.

### An analysis of the Table.

2. The Table at the end is interesting mainly in so far as it indicates the extent to which Bengalis (excluding local hillmen and hill women) are represented on the employment roll of the tea estates of Bengal. In the Garden establishment, 79 per cent. are Bengalis and among Managers, Officers and Engineers also 60 per cent. are Bengalis. But in the grades of Supervisors and skilled workmen, Bengalis form only 52 and 5 per cent. respectively of the total number of employees in those grades.

### Qualifications and remunerations of employees.

3. The most important person on a tea estate is the Manager on whom rests the responsibility for organising the whole show. A successful Manager has to be of a man of very many parts and of very considerable experience. A thorough knowledge of engineering, both mechanical and structural, is a great asset and many tea estate managers serve a complete apprenticeship in an engineering firm before taking an appointment in tea. The Manager must also have a thorough knowledge of agricultural practices in so far as they affect the husbandry of tea in all its varied circumstances. Furthermore, he must be familiar with accounting, as much depends upon the accurate recording of the financial side of the undertaking. Managers are helped by Assistant Managers and Engineers who are expected to possess more or less the same qualifications as themselves, but who need not have as much experience or administrative ability. In the Bengal tea estates, Managers get pay from Rs. 250 to Rs. 1,500 per month and Assistant Managers and Engineers from Rs. 100 to Rs. 1,000 per month.

4. Then come the Supervisors, men who "supervise" workmen and attend either to the machinery or to the manufacturing process. They must have practical experience and are generally persons promoted from the rank of skilled workmen. Their pay ranges from Rs. 30 to Rs. 100 per month.

5. Skilled workmen are the persons who have to take part in some stage of the manufacturing process. They must have skill which can

only be acquired by experience in a tea factory and are paid between Rs. 15 to Rs. 30 per month.

6. Finally, there is the large body of coolies and menials who have to do most of the heavy manual work and are paid at the rate of Rs. 8 to Rs. 20 per month.

7. In the Garden Establishment are the Garden Assistants and Supervisors who come next to the Manager and Assistant Managers. Garden Assistants and Supervisors must have a thorough knowledge of agricultural practices in so far as they affect the husbandry of tea and must also be able to control and supervise garden labour. They have to apportion the work to be done each day, supervise this work and also record what has been done and who shall get wages for work done. Their pay varies from Rs. 20 to Rs. 60 per month.

8. Coolies, both men and women, are purely agricultural workers who hoe the soil and pluck and prune the bushes. These people generally live in houses built and maintained by the tea estate and frequently cultivate vegetable gardens and paddy lands on their own account during the afternoons. They are provided with medical and hospital facilities free of charge and there is also a system of free primary education for the young people. Their wages come to anything between Rs. 6 and Rs. 15 per month.

9. Most of the tea estates (there are a few unfortunate exceptions in estates owned by Indians) have got their own dispensaries or hospitals and medical officers, and quite a number of doctors, compounders and midwives secure employment there. Medical officers are paid salaries varying from Rs. 100 to Rs. 700 per month and compounders and midwives from Rs. 30 to Rs. 75 per month.

#### **Some special facilities enjoyed by tea estate employees.**

10. In addition to the money wages or salaries enumerated above, tea estate employees enjoy a number of special facilities which, in effect, very much augment their pay bill. Thus most of the tea estate employees get free house and fuel and free medical attendance, and a servant allowance is also not uncommon. Of course, a tea estate cannot provide all the amenities for social intercourse and entertainment which are available to those who are employed in big cities, but life on a tea estate is not a bit dull, particularly to those who love sports and have agricultural and horticultural hobbies.

#### **Prospects of further employment of Bengalis.**

11. For a considerable time to come, there is very little chance of educated Bengalis being employed as coolies and menials on these tea estates, because the wages are low and Bengalis are not hardy enough to stand the strain of prolonged outdoor work. But in the grades of skilled workmen, supervisors and garden assistants there is still good scope for employment and educated Bengali lads would do well to give their attention to these jobs. They may also secure employment in the tea trade as blenders, tasters, brokers or agents.

TABLE.

## Employment in the Tea Estates.

	Bengalis.	Non-Bengalis.	Total.	Percent- age of Bengalis.	Percent- age of non- Bengalis.
<i>A.—Factory and office.</i>					
Managers, Assistant Managers, and Engineers ..	316	208	524	60	40
Supervisors ..	320	292	612	52	48
Skilled workmen ..	152	2,969	3,121	5	95
Coolies and menials	512	3,943	4,455	11	89
Clerks and salesmen	260	28	288	91	9
Total ..	1,560	7,440	9,000	17	83
<i>B.—Garden establishment.</i>					
Garden Assistants and Supervisors ..	1,300	348	1,648	79	21
Coolies .. ..	1,404	78,928	80,332	2	98
Total .. ..	2,704	79,276	81,980	3	97
<i>C.—Medical establishment.</i>					
Medical Officers ..	220	52	272	81	19
Compounders and Midwives ..	68	24	92	74	26
Menials .. ..	44	160	204	22	78
Total .. ..	332	236	568	58	42
Grand Total ..	4,596	86,952	91,548	5	95

N.B.—The figures for non-Bengalis in this Table include at least 75 per cent. of hillmen and hill women, who may be called Bengalis inasmuch as they are permanently resident in a part of this province.

## XXVII.—Collieries.

### Introductory.

1. Before the separation of the province of Bihar from Bengal in 1912, the development of the coal industry was practically confined to the then Bengal, its growth in the Central Provinces being of comparatively recent origin. After the separation of Bihar the number of collieries falling within the boundary of Bengal has considerably diminished, but even so Bengal collieries give employment to over 25 thousand men and women. Fifty nine per cent. of the employees are Bengalis and the rest are either Europeans or non-Bengali Indians.

### An analysis of the Table.

2. The Table at the end shows that of the 25,139 employees in the collieries of Bengal, as many as 10,412 men and women are non-Bengalis. Analysing the figures further, we find that 41 per cent. of the Managers and Assistant Managers, 46 per cent. of the Engineers and 28 per cent. of the Underground Supervisors are non-Bengalis. Among skilled workmen, 33 per cent. are non-Bengalis and among unskilled labourers and menials their proportion is 45 per cent. Doctors and clerks are mostly (92 and 91 per cent.) Bengalis.

### Qualifications and remunerations of employees.

3. The job of a Colliery Manager is a very responsible one: he is responsible, under the Mines Act, for seeing that safety measures enjoined by the Act are carried out, and is also responsible to his employers for the running of the colliery. He has to see that output is maintained at a satisfactory level and that costs are kept as low as they reasonably can be. He must have a thorough practical knowledge as to how to perform various types of underground work, a good mechanical and electrical knowledge, and a knowledge of elementary law, medicine and chemistry. Above all things, he must be able to handle and control men. The pay of Managers varies according to the size of the colliery he is placed in charge of and ranges from Rs. 300 to Rs. 1,500 per month.

4. Next in importance are the Assistant Managers or Sub-Managers. They, too, must be equipped with up-to-date knowledge of, and training in, mining methods, and must be able to handle and control men. Their pay ranges from Rs. 150 to Rs. 1,000 per month.

5. Mechanical and Electric Engineers have to look after colliery plants and workshops. In modern mechanised collieries able and hard-working men are required for this task. Colliery engineers must have acquired necessary training and qualifications in technical institutions and should also have practical knowledge of the working of such plants. Then again, in modern mining there is scope for other varieties of Engineers, e.g., Development and Planning Engineers, Safety Engineers, Ventilation Engineers, etc., who must have specialised training in the appropriate branch of engineering. The pay of engineers varies from Rs. 150 to Rs. 1,000 per month.

6. Then there are the underground surveyors and supervisors (overmen and sirdars). Surveyors must have had specialised training in mine survey work. Supervisors, on the other hand, are men promoted from the rank of skilled workmen and must have long practical experience of underground work in mines and collieries. The pay of employees in this grade varies from Rs. 40 to Rs. 250 per month.

7. Skilled workmen, including mechanics and mistris, need not have any engineering or mining certificate or diploma from a school or college, but must possess practical experience. Their pay varies from Rs. 20 to Rs. 70 per month.

8. Finally, there is the large body of coolies—men, women and children who have to do the manual work only. They are usually paid on piece-rate basis, their monthly remuneration amounting to anything between Rs. 7 to Rs. 20 per month.

#### Where the requisite training can be had.

9. The requisite theoretical training in Mining Engineering can be had either at the Indian School of Mines, Dhanbad, or at the Benares Hindu University. At the Dhanbad School, the courses offered are (a) three years' certificate course in Coal Mining or in Metalliferrous Mining or in Geology, and (b) four years' Associateship course in Mining Engineering and in Geology. The Benares Hindu University, on the other hand, provides advanced and specialised instruction in Mining and Metallurgy up to a degree standard (B.Sc.). The courses are pretty long and thorough, being of four years' duration after the Intermediate Science.

10. Besides the above courses, the Department of Mines of the Government of India conduct examinations for (a) Colliery Managers' certificates of competency (First and Second Class), (b) Surveyors' certificates of competency, and (c) Sirdars' certificates of competency. Students holding diplomas or degrees of the Dhanbad School and Benares Hindu University are permitted to sit for these examinations after a comparatively short period of practical experience; otherwise, they have to get previous practical training in a colliery for five years in the case of a First Class Manager's certificate, three years in the case of a Second Class Manager's certificate and two years in the case of a Surveyor's certificate. Detailed rules about these examinations are given in Part III of the Handbook on Avenues of Employment, Volume I.

11. Those who are more ambitious may proceed to Great Britain for higher training. The student of mining engineering would, however, do well to arrange for at least a year of practical mining experience in India before going to Great Britain for his training, as he would thus have had experience of and be prepared for the hard work of his practical course. In Great Britain, the course for coal mining usually lasts four years and consists of a "sandwich" course, combining theoretical and practical training. Courses are available at the Universities of Birmingham, Durham, Edinburgh, Glasgow, Leeds, London, Manchester, Sheffield, Nottingham and Wales. The Board for Mining examinations (Mines Department, Millbank, London, S.W.I) hold examinations for certificates of competency as Managers and Under-Managers twice a year during the last complete weeks of May and

November at different centres in Great Britain, in the same way in which the Department of Mines of the Government of India hold similar examinations in India. For the study of metallurgy, on the other hand, courses are available at the Royal School of Mines, London, and the Universities of Birmingham, Durham, Leeds, Manchester and Sheffield. These courses extend over a period of three to four years, the first portion being the same as that for mining, whilst the concluding portion is devoted to practical work in laboratories and furnaces together with a course of Physical Chemistry, and such special training as the assaying of the ores of ferrous and non-ferrous metals, fuel technology and chemistry of gases, and the technology of refractory materials.

### **The future and prospects of further employment of Bengalis.**

12. Although the total number of annual vacancies in the grades of Managers, Assistant Managers and Engineers is not large, it must be said that so far an appreciable number of educated Bengali youths have not gone in for specialised training in Mining Engineering or Metallurgy. Many of the existing Bengali Mine Managers and Engineers do not have that high technological training which is possessed by Europeans and hence a few more Bengali young men would do well to get the necessary training in mining engineering or metallurgy.

13. In the grades of supervisors and skilled workmen, although the percentage of Bengali employees is not unsatisfactory, barely 25 per cent. of them are men with some decent education. It appears that educated Bengali lads have not cared so far for employment as supervisors or skilled workmen. As, however, the wages offered are very decent, they would do well to get themselves properly trained so that they may become eligible for these posts.

14. Finally, it may be mentioned that the coal trade, as distinguished from the coal industry, also offers a fairly extensive and fruitful field for employment to Bengali young men. There are three principal types of employment in the coal trade—(a) as brokers, (b) as coal merchants and (c) as stockists or depot holders. The broker operates mostly in big coal marts (e.g., Calcutta) and visits the offices of coal producers and consumers every day, keeping himself well posted with current prices as well as the demand and supply of coal. He sells to consumers, i.e., to exporters of coal or merchants and receives his brokerage on each ton of coal sold and delivered. No large investment of capital is necessary in this brokerage business, but the broker who wants to succeed must have pluck, steadiness and honesty. Coal merchants and stockists or depot holders, on the other hand, supply coal to the final consumers: they must have capital to purchase large quantities of coal outright and must be able to wait until the money so invested can be realised from the final consumers. In recent years, this coal trade in Bengal has passed almost completely into the hands of non-Bengalis. It should be the aim and ambition of the young men of this province to recover this trade for themselves; and to achieve this they must show grit, honesty, and ability to stand a few rebuffs and snubs.



TABLE.

## Employment in Collieries.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Managers and Assistant Managers .. ..	61	42	103	59	41
2. Engineers .. ..	61	53	114	54	46
3. Underground Supervisors .. ..	251	98	349	72	28
4. Skilled workmen .. ..	2,642	1,277	3,919	67	33
5. Coolies .. ..	10,843	8,854	19,697	55	45
6. Doctors .. ..	59	5	63	92	8
7. Clerks .. ..	811	83	894	91	9
Total .. ..	14,727	10,412	25,139	59	41

**PART II.**

**Trades and Professions.**

## Part II—Trades and Professions.

### XXVIII.—Plumbing.

#### Introductory and an analysis of figures.

1. Plumbing has been very inadequately taken up as a profession by the people of this province. There are nearly eight firms of Plumbers and Sanitary Engineers in Calcutta and an investigation into the staff employed by them reveals that barring the superior posts of Supervisors, Overseers and Foremen, not even five per cent. of the large mistri staff is Bengali in composition. The following figures compiled from returns submitted by these firms are significant:

	Rates of pay.	Total number of Bengalis.	Total number of non-Bengalis.	
			(a) Europeans and Anglo-Indians.	(b) Indians.
	Rs.			
1. Managers or Engineers ..	200 to 1,500	14	4	..
2. Supervisors, Overseers or Foremen	30 to 150	22	2	2
3. Mistris .. .. .	25 to 50	42	..	720
4. Half-mistris and coolies ..	12 to 25	30	..	850

2. It would thus appear that except in posts of (a) Managers or Engineers and (b) Supervisors, Overseers or Foremen, the overwhelming majority of workers are non-Bengali Indians. Out of 1,642 mistris, half-mistris and coolies only 72, i.e., less than 5 per cent. are men of this Province. As a matter of fact, practically all these non-Bengali mistris, half-mistris and coolies come from the neighbouring province of Orissa.

#### Scope of employment for Bengalis.

3. Bengali young men may secure two types of employment in Plumbing and Sanitary Engineering firms. The first type of employment is as Supervisors, Overseers or Foremen. Most firms in Calcutta take in a few apprentices every year or every alternate year and they receive their training partly in the workshops of their firm (where there is one) and partly in an institution like the Calcutta Technical School at 110, Surendra Nath Banerjee Road, Calcutta. This latter institution offers a complete course of instruction in Sanitary Engineering and Plumbing extending over a period of three years (details are given later). Students who pass out this course usually get employment as Supervisors, Overseers or Foremen.

4. The scope of employment as Supervisors, Overseers or Foremen is, however, limited. For every 100 mistris a firm can at best have 3 or 4 such supervising men, and hence even a partial solution of the problem of unemployment must be sought elsewhere. This would lie in more and more Bengalis taking up the work of actual mistris.

#### Why there are so few Bengali mistris in the plumbing trade.

5. It may be pertinently asked why the number of Bengalis in the rank of mistris is so small. The reasons adduced by the various firms are—

- (a) Oriyah mistris are supposed to know the job better: it is said that they have a special aptitude for this kind of job and as such they can easily outshine their Bengali brethren in point of efficiency.
- (b) Bengalis are unwilling to do the manual work involved in the job of mistris and half-mistris. They are reluctant to handle tools or to do "dirty" work.

6. It seems, however, that if only the unemployed Bengali youth would overcome his habitual sensitiveness and agree to take his rightful share in a profession to which he is to-day a stranger, he would find that the so-called better aptitude of the Oriyah is more a myth than a reality. The important point to remember is that one must start at the bottom, i.e., as a half-mistri, and be prepared to work one's way up.

#### How and where the requisite training may be had.

7. For posts of mistris and half-mistris, no special training in an institution is necessary. One has to get attached to a firm of Plumbers or Sanitary Engineers and gradually learn the job in practical construction or fitting work in company with qualified mistris. An intelligent young man with some school education, willing to learn and ready to work with his own hands, should not take more than two to three years to become a fully qualified mistri.

8. For posts of Supervisors, Overseers or Foremen, the Calcutta Technical School offers the best possible training. The course extends over three years and the final certificate issued for this course is one of the necessary qualifications for the registration of plumbers by the Calcutta Corporation. Candidates for admission to the course must be over 16 years of age, must have passed an entrance examination of the School or the Board of Apprenticeship Training Admission Examination, and must be either *bona fide* apprentices of suitable workshops or must be registered plumbers in Calcutta. The fee for the course is Rs. 96 per annum.

#### The Calcutta Corporation and Licensed Plumbers.

9. There are altogether 326 registered plumbers in Calcutta of whom 288 are Bengali and 38 non-Bengalis. The exact number of unregistered plumbers (including those belonging to the mistri class) is not known, but private enquiries have elicited the information that their number would be anything between 1,200 and 1,600.

10. Two classes of licenses are granted to plumbers in Calcutta by the Calcutta Corporation:—

- (a) License—Plumbing—under Chapter XVII (Water) of the Calcutta Municipal Act.
- (b) License—Drainage—under Chapter XVIII (Drains) of the Calcutta Municipal Act.

11. The requisite qualifications to hold any one of the above licenses are as follows:—

- (a) A candidate must have undergone a course of practical training under a registered plumber for at least 3 years or he must be a passed hand in the Sanitary and Plumbing course of the Calcutta Technical School.
- (b) On producing a certificate to the above effect he is required to sit for a test examination for each class of the licenses on payment of a fee of Rs. 15 for each examination. On his passing the examination he has to take out a license on payment of a further fee of Rs. 12 for each class of the above licenses, which are renewable every three years.

12. It may be noted that quite a number of plumbers ply this trade in Calcutta without attaching themselves to any firm. It is difficult to say what their monthly earnings come to, as these depend on the enterprise, initiative and aptitude of the individual. It, however, appears that they can earn anything between Rs. 50 to Rs. 200 a month.

## XXIX.—Dentistry.

### Introductory.

1. It is not perhaps known that there are now great opportunities of a career in Bengal in the profession of dentistry. Until recently there were few institutions in India where one could study dentistry along scientific lines and as a consequence, those who wanted to practise as qualified dentists had to go to Europe or America for the training—an arrangement which was both inconvenient and costly. As a direct result of this lack of suitable training facilities in India, the market was flooded with quack dentists. People without any basis of preliminary education would become apprenticed to European, American or Japanese dentists practising in India, learn a smattering of the mechanical aspects of dentistry and set up as dentists. They in turn would teach others and thus there came to practise a large number of inexperienced “dental surgeons”. As there was no legislation to regulate this stream of quacks, often foreigners (Japanese, Chinese and others), innocent of any scientific education in dentistry, would flock to India and establish themselves as dentists.

### The new legislation and prospects of dentistry as a career.

2. It became evident that unless some regulations were framed by Government, the public would cease to look upon dentistry as a scientific profession and properly qualified dentists would suffer. So the matter was taken up by the Government of Bengal and in the year 1938 the Bengal Dentists' Act was passed. Henceforth dental surgeons will have to get themselves registered and none but those who have had a really scientific training in dental science will be permitted to register. Although unregistered practitioners will not, for the present, be barred, the registered practitioner will now have many opportunities of service open to him which his unregistered fellow-practitioner will not have.

3. The dental profession is not at all crowded at present. No doubt larger cities like Calcutta, Bombay and Madras have quite a number of dentists, but there are district and subdivisional headquarters as also many outlying municipal areas where there are no dentists and one could make a very good living if one were to settle down and practise in these places. Now, with a scheme of registration of properly qualified dentists by Government the difference between an unqualified dentist and one properly qualified will become so patently evident that the latter will be at a decided advantage. Moreover, hospital and other appointments in public institutions will be open only to the registered dentist, thus giving him a status he did not have before.

### Where the requisite training can be had.

4. There are two Government Dental institutions in India—the de Montmorency Dental College, Lahore, and the Sir Currimbhoy Ebrahim Dental School, Bombay. Besides these, there are two first-class private institutions, the Calcutta Dental College, 114, Lower

Circular Road, Calcutta, and the Nair Hospital Dental College, Bombay. All these institutions take in Intermediate passed students (Arts or Science) and the course is of four years. The Calcutta Dental College now gives the diploma L.D.Sc. (Cal.), but in future the examinations will be held by the State Medical Faculty of Bengal and the diploma awarded will be called L.D.S. It should be noted, however, that dentistry is a branch of medicine and the prospective student should have a natural inclination towards, or interest in, medicine and scientific subjects generally. He should possess powers of observation aided by a good visual memory, a liking for working with the hand, a good reasoning capacity, a comprehension of mathematics and an orderly mind.

5. Those who are more ambitious may go abroad for advanced or specialised training in dentistry. There are over thirty A grade Dental Colleges in the U.S.A. and Canada: the principal of them are in Philadelphia, Boston, Iowa City, Ann Arbor, Chicago, Toronto and Montreal. The diploma awarded is D.D.S., the course extends over four years and an Intermediate-passed student of an Indian University is eligible for admission. These dental institutions are generally very well endowed and well equipped and the arrangements for teaching the science are thoroughly up-to-date. Not infrequently students from Great Britain and other parts of Europe go to America for post-graduate study in dentistry.

6. In Great Britain advance in dental science has been rather late: as a matter of fact, it was not until 1921 that Great Britain began to take serious interest in dental education. Since then, however, great improvements have been made and the teaching facilities for the L.D.S. and B.D.S. courses greatly augmented. Generally speaking, an Intermediate-passed student of an Indian University is eligible to study for the L.D.S. and B.D.S. courses. The curriculum for the L.D.S. course extends from 4 to 4½ years and that for the B.D.S. course extends from 5 to 6 years. Those in possession of recognised dental qualifications from other countries are generally given 2 to 3 years' exemption.

### XXX.—Bakery and Confectionery Business.

1. It is not perhaps known to the unemployed young men of Bengal that there is still considerable scope of making a living in bakery and confectionery business. Very few of the towns in the mofussil have any proper bakery, but it is well-known that there is considerable local demand everywhere for good bread, biscuits, cakes, pastries, lozenges and sweets. At present, much of this demand cannot be met and even where small local supplies are available, they are produced under very unhygienic conditions and as such do not appeal to any but the poorest classes.

2. Investigations into the cost of production of bread, biscuits, cakes, pastries, lozenges and sweets reveal that if in the mofussil (where eggs, butter and fuel are very much cheaper than in Calcutta) enterprising young men having the necessary practical training start small-scale bakery and confectionery business in the various municipal towns there (the initial capital required is no more than Rs. 150 to Rs. 200 for each such establishment) they can easily make a clear profit of Rs. 40 to Rs. 50 per month. With some modest expansion and improvement, this figure can go up to even Rs. 100 per month. With slightly bigger bakeries (the initial capital required would then be about Rs. 1,000) it is possible to make a clear profit of Rs. 250 to Rs. 300 per month in the bigger mofussil towns.

3. Very good practical training in the methods of making bread, cakes, biscuits, pastries, lozenges, sweets, etc., can now be had at the Indian Bakery and Confectionery College, 10/1, Chakrabere Road South, Calcutta. The period of training is about 3½ months and inclusive fees for the entire course Rs. 30 only. After passing out of this institution young men can easily set up bakeries and/or confectioneries in their native districts or subdivisions. Those who do not want to start their own bakery or confectionery may secure employment in hotels, bakeries or confectionery factories in and around Calcutta.



## XXXI.—Share and Stock-Broking.

### Introductory.

1. Share and stock-broking has been very inadequately taken up by the people of this province as a profession, with the result that although there are now two Stock Exchanges in Calcutta (the Calcutta Stock Exchange at 7, Lyons Range and the Bengal Share and Stock Exchange at 8, Lyons Range), the number of Bengali brokers, under-brokers and assistants is very limited. It cannot be said that the supply of persons anxious to take up share and stock-broking as a profession is greater than the demand. In the last few years there has been a considerable increase in the number of joint-stock companies in the country, and a large number of shares is now bought and sold in the Stock Exchanges. Considered from this point of view, the number of persons required in this business is inadequate and there seems to be good prospects of stock-broking as a career. As a matter of fact, it is an open secret that the people of this province have so far played a negligible part in this profession.

### Reasons for paucity of Bengalis.

2. Bengalis are so few in share and stock-broking business because they lack initiative, are not business-minded and do not have enough money to become full-fledged members of the Stock Exchanges. With the inauguration of the Bengal Share and Stock Exchange where one can buy a share of membership at a price only slightly higher than the face value (Rs. 250 and Rs. 500), the difficulty of finance is no longer an important handicap. Moreover, in order to make a beginning in this profession one does not have to become a full-fledged member of a Stock Exchange. One can easily start as a sub-broker or even as an assistant and then gradually work one's way up. As a matter of fact, by far the largest number of men in the Stock Exchanges are non-members or outsiders.

### How Bengali Youths can make a beginning.

3. The most important point to remember is that share and stock-broking should be taken up seriously as a profession like any other profession. When a Bengali youth has made up his mind in this matter, he should go to one of the Stock Exchange buildings (or rather the outer enclosure of them) and personally observe how shares and securities are sold and purchased, what languages are used in the process and how bargains are eventually struck. He should also be on the lookout for parties for the purpose of securing orders and gradually learn the art of calling and talking with them. This is not as easy as it sounds, particularly for a person who has not been brought up in a business atmosphere, but a really enterprising and persevering youth should be able to make a success of himself. During this preparatory period, he must study facts about various shares and securities and also know the intrinsic position of the companies with whose shares and

securities he may soon have to deal. To put it in a nutshell, he must be a veritable mint of information.

4. After he has acquired the necessary preliminary experience from the outer enclosure of the Stock Exchange, a Bengali youth should try to get an entry into the Hall where actual business is transacted. This he can do either by becoming a partner (sub-broker) in an existing member firm or by becoming an assistant in it. For either of this privileges, he has to pay some premium (the amount varies according to the standing and repute of the firm to which he wants to get attached) and then his earnings and future prospects depend mostly on himself. To some extent, he has to create a field for himself where there is none, by kindling a desire in the minds of wealthy people to deal in shares and securities. Unless he can get good and honest parties who would give him business, his chances of making a decent living in this profession would be very meagre indeed.

#### The future.

5. The proportion of Bengalis in the stock-broking line is small because the middle class which forms the majority of any stock-broking profession anywhere in the world is not prepared in Bengal to subject themselves to the vicissitudes and precariousness of this profession. It is the general opinion that there is no fundamental defect in the Bengali character which might prevent Bengalis from becoming successful in this line. As such, if Bengali young men would take to this profession seriously, there is no reason why they, too, should not be able to make as satisfactory a living out of it as their non-Bengali brethren.

## XXXII.—Automobile Engineering Workshops.

### Introductory.

1. With the increasing popular demand for automobiles, workshops for repairing them and also for assembling spare parts have sprung up in various parts of the province. Most of them are, however, just automobile repair workshops and only a few of them do specialised automobile engineering work in addition to the work of repairs. These workshops are mostly located in or around Calcutta, but there are also a few petty workshops in the mufassil urban areas.

2. The present survey was confined to the workshops in and around Calcutta and 17 such establishments (this is the total number given in the latest Classified List of Factories issued by the Government of Bengal) were addressed. The figures in the Table at the end relate to these 17 workshops only. It would be seen that the total employment in the 17 automobile engineering workshops in and around Calcutta is over 1,600 and of these nearly 1,100 are Bengalis and over 500 non-Bengalis.

### An analysis of the Table.

3. Employees in automobile engineering workshops fall under the following main grades—(a) Managers and Engineers; (b) Supervisors; (c) Mechanics of various types; (d) Apprentices, and (e) Menials and unskilled labourers. The Table, as it stands, shows that of the 1,612 employees, 1,074 (or 67 per cent.) are Bengalis and 538 (or 33 per cent.) are non-Bengalis. Analysing the figures further, we find that of the 34 Managers and Engineers only 5 are Bengalis and even among Supervisors (there are 63 of them), only 29 (or 46 per cent.) are Bengalis. The number of Bengalis is higher in the group of mechanics and apprentices (their percentages are 70 and 53 in these two groups) and in the group of clerks Bengalis have a virtual monopoly.

### Qualifications and remunerations of employees.

4. Managers of automobile engineering workshops are persons who have general business experience and possess administrative ability, while Engineers are to have a sound knowledge of automobile engineering. Many of the Engineers have had their training in Great Britain, U.S.A. or Germany. Their pay ranges from Rs. 200 to Rs. 1,000 per month.

5. Supervisors also generally have a sound knowledge of automobile engineering and must be able to control labour in a workshop. Many of these supervisors are Anglo-Indians as it is found that they are more hardy than Indians and are able to control labour better. The pay of supervisors ranges from Rs. 75 to Rs. 350 per month.

6. There are mechanics of various types in these automobile engineering workshops. Some are carpenters, some are painters, some are motor fitters, some are blacksmiths and tinsmiths, some are electro-platers and brass-platers and some are dynamo fitters and wiremen.

The pays of these various classes of mechanics naturally vary, but, generally speaking, the pay is seldom less than Rs. 30 per month. The average figure is about Rs. 50 and pays often range from Rs. 75 to Rs. 100 per month, according to the skill and ability of individuals.

7. Apprentices are persons who are trained up to become mechanics and supervisors. Usually these apprentices have to pay a premium and then only are they permitted to have a thorough training in automobile engineering. Apprentices are also taken in without premium from time to time and instances are not rare when a workshop begins to pay some wages to its apprentices as soon as they have become slightly useful.

8. Menials and unskilled labourers are sometimes on a monthly pay roll and sometimes they are employed on daily wages. Their average remuneration varies from Rs. 10 to Rs. 25 per month.

#### **Some general observations on prospects of further employment of Bengalis.**

9. Automobile engineering as a branch of study does not appear to have appealed very much to Bengali young men. It seems, however, that there is a great deal of scope for men who have not merely the theoretical knowledge of automobiles and their mechanism, but also have a good practical training in this branch. There are Motor Schools in Calcutta where one can pick up the first elements of this branch of engineering. The more ambitious may then proceed to Great Britain or U.S.A. for further training. Higher study may be had in two branches, either (a) the study of the manufacture of automobile engines, or (b) general repair (garage) or sales work. For the first, the usual degree or diploma course in Mechanical Engineering (with specialisation in internal combustion engines) followed by a period of practical training in a suitable works is necessary. Repair and garage training work, on the other hand, may be learnt either in factories or in Technical Colleges and Polytechnics.

10. The largest scope of employment exists in the grade of supervisors and mechanics and it is certainly not to the credit of Bengalis that 54 per cent. of the supervisors and 30 per cent. of the mechanics are non-Bengalis. Of the Bengalis in this class, hardly 10 per cent. are educated: most of the Bengali employees belong to the artisan class. It is the general complaint of employers and workshop managers that in the past this type of work has not appealed to *bhadralog* young men and that several attempts to interest them in it have ended in failure. Times have changed now. The unemployed young men of Bengal must shake off their habitual lethargy, forget their false sense of dignity and agree to gradually work their way up in these automobile workshops.

TABLE.

## Employment in the Automobile Engineering Workshops of Bengal.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Managers and Engineers	5	29	34	15	85
2. Supervisors ..	29	34	63	46	54
3. Mechanics of various classes and types ..	865	370	1,235	70	30
4. Apprentices ..	56	49	105	53	47
5. Menials and unskilled labourers ..	91	50	141	65	35
6. Clerks .. ..	28	6	34	82	18
Total ..	1,074	538	1,612	67	30

### XXXIII.—Motor Transport Business.

#### Introductory.

1. For some time past motor transport business has been solving the bread-earning problem of a large section of population in this province. It is certain that it will give employment to a still larger number of people, as trade between districts as also between neighbouring provinces increases and roads improve.

2. There are three main types of business done in this line: (a) handling of private passenger traffic in taxis; (b) handling of passenger traffic in buses; (c) handling of goods traffic in lorries. The largest number of taxis and lorries are to be found in Calcutta and the three districts bordering on Calcutta, viz., Hooghly, Howrah and 24-Parganas. Buses, on the other hand, are evenly distributed between Calcutta and the neighbouring districts on the one hand and the outlying districts on the other.

#### An analysis of the Table.

3. The Table at the end gives figures of the total number of buses, taxis and lorries in Calcutta, in the three districts bordering on Calcutta, as also in the rest of Bengal. It would appear that in Bengal there are as many as 2,005 buses, 2,358 taxis and 3,675 lorries. An analysis of the ownership of these vehicles reveals the fact that of these nearly 7,000 vehicles, only about 2,500 (or 36 per cent.) are owned by Bengalis and the owners of the rest (or 64 per cent.) are non-Bengalis. This very large percentage of non-Bengali ownership of motor vehicles which are not private is due to two main reasons. Firstly, the average Bengali has not got the capital to own a large number of motor vehicles and even if he wants to buy motor vehicles on the instalment plan, he does not get the credit facilities which the non-Bengali owner gets from men of his own community. Secondly, until recently, even such Bengalis as had money did not care to invest it in motor transport business, and once non-Bengali owners had captured the market, it was not easy to oust them from the position in which they had entrenched themselves.

4. The figures of drivers and conductors engaged in motor transport business in Bengal are more startling still. (Of the 23,748 holders of professional driving licenses in Bengal, as many as 18,192 (or 77 per cent.) are non-Bengalis and only a bare 23 per cent. happen to be Bengalis.) The percentage of Bengali conductors is slightly better, forming 60 per cent. of the total. The figures for Calcutta and the three districts adjacent to Calcutta, however, show that in this area non-Bengalis preponderate both as drivers and as conductors to a much greater degree than in the mofussil.

5. An enquiry into the reasons for paucity of Bengalis as drivers and conductors reveals that (the average Bengali is averse to the hard manual labour and long hours of irregular work which taxi, bus or lorry driving entails) Another reason is that Bengalis in general do not have that thorough knowledge of driving and mechanism of motor vehicles which is possessed by non-Bengalis and as such they

are considered to be less efficient. Finally, Bengalis as a rule cannot work together for long for a common purpose: they have little sense of the value of discipline in business and even when they take to business they continue to hanker after safe jobs in an office—a species of intellectual snobbery which eats into the little enterprise and energy they may have had at the start.

### **Earnings in motor transport business.**

6. Earnings in the motor transport trade naturally vary from district to district and it is not possible to speak in general terms that owners make so much profit per annum or drivers and conductors earn so much per month as wages. An intensive enquiry, however, reveals that in certain areas owners make a net profit of as much as Rs. 100 to Rs. 200 per month per bus, lorry or taxi while in most areas the average is Rs. 30 to Rs. 75 per month per vehicle. Drivers, on the other hand, get wages varying from Rs. 20 to Rs. 46 per month and the wages of conductors vary from Rs. 10 to Rs. 25 per month.

### **The future.**

7. Motor transport business offers good opportunities of making a living to persons who are really hardworking and have got energy and enterprise. As owners, as drivers, as conductors, and even as cleaners, a large number of Bengali young men may make a decent living if only they would give up their tradition of having an office job as the *summum bonum* of their life. Young men should be encouraged to become expert drivers and to get good training in motor engineering, and owners should be encouraged to employ Bengali drivers, conductors and cleaners as far as possible. Local authorities may also use their discretion in the matter of granting licenses, giving, as far as possible, preference to men who are either natives of, or are permanently domiciled in, the area for which a license is sought. It should, however, be remembered that if Bengalis themselves do not wake up in the matter, no amount of local preference can help them for long.

## Employment in the Motor Transport Business, Bengal.

	Calcutta.	District round about Calcutta (Hooghly, Howrah and 24 Parganas).	Other districts (excluding Calcutta and districts round about Calcutta).	Total for All-Bengal.
1. Number of buses ..	625	338	1,042	2,005
2. Number of taxis ..	980	443	935	2,358
3. Number of lorries ..	2,760	373	542	3,675
4. Number of vehicles owned by—				
(a) Bengalis ..	541 (12 per cent.)	296 (55 per cent.)	1,684 (82 per cent.)	2,521 (36 per cent.)
(b) Non-Bengalis ..	3,824 (88 per cent.)	247 (45 per cent.)	324 (18 per cent.)	4,395 (64 per cent.)
Total ..	4,365	543	2,008	6,916
5. Number of drivers who are—				
(a) Bengalis ..	1,900 (10 per cent.)	919 (61 per cent.)	2,737 (84 per cent.)	5,556 (23 per cent.)
(b) Non-Bengalis ..	17,100 (90 per cent.)	580 (39 per cent.)	512 (16 per cent.)	18,192 (77 per cent.)
Total ..	19,000	1,499	3,249	23,748
6. Number of conductors who are—				
(a) Bengalis ..	629 (29 per cent.)	326 (54 per cent.)	2,308 (87 per cent.)	3,263 (60 per cent.)
(b) Non-Bengalis ..	1,551 (71 per cent.)	273 (46 per cent.)	330 (13 per cent.)	2,154 (40 per cent.)
Total ..	2,180	599	2,638	5,417



## XXXIV.—River Transport Business.

### Introductory.

1. Bengal is pre-eminently a land of rivers and river transport business solves the bread-earning problem of a large section of its population. In recent years, however, a large number of boats have passed into the hands of non-Bengalis and in quite a few districts, ferries and boats handling goods and agricultural products have an appreciably large proportion of non-Bengali employees. While the situation is not yet serious enough to cause anxiety, it behoves Bengalis to see that in the years to come they are not gradually displaced from a business which has been their virtual monopoly so far.

2. There are two main types of business in this line: (a) handling of passenger traffic—by ferries, *goina* boats and others, and (b) handling of goods and agricultural products. The largest number of boats are to be found in Eastern Bengal with its many rivers and *khals*.

### An analysis of the Table.

3. The Table at the end gives figures of the total number of boats, boat owners and boat employees in Bengal. It would appear that in Bengal there are nearly 150,000 boats owned by over 75,000 persons and giving employment to as many as 237,000 people. Of the owners, 10 per cent. are non-Bengalis and of the employees 18 per cent. are persons who do not belong to this province. Non-Bengalis preponderate in such districts as Malda, Rajshahi, Jalpaiguri, Dinajpur, Hooghly, 24-Parganas and parts of Mymensingh and Nadia.

### Earnings in river transport business.

4. Once upon a time trade in public ferries and *goina* boats was very remunerative. At the public and open bids at which these ferries were settled, bids would be pushed up to very high, and sometimes uneconomic, figures. In some areas up-country merchants would cutbid local Bengali bidders and establish a regular chain of ferries controlled by themselves in those and adjacent areas. In recent years, however, this trade has ceased to be as profitable as it was, say, a decade or two ago. Earnings vary very widely from district to district and the minimum and maximum now-a-days are Rs. 10 and Rs. 70 per month, respectively.

5. Then there are boats which handle goods and agricultural products. Such boats are more numerous than those handling passenger traffic, but the average earnings are much less. Again, figures vary very widely from district to district and the minimum and maximum are Rs. 5 and Rs. 30 per month respectively.

6. Finally, there is the huge army of boat employees. Their earnings depend largely on the profitability of traffic and figures vary as widely as Rs. 5 to Rs. 25. In boats controlled by railway or steamship companies and local bodies, however, employees are much better off: not only do they get decent fixed wages ranging from Rs. 15 to Rs. 25 per month, but they get a considerable amount of supplementary income by way of tips and *baksises*.

TABLE.

## Employment in River Transport Business.

*A.—Total number of boats.*

Number of handling passenger traffic.	Number of handling goods and agricultural products.
40,028	105,484

*B.—Total number of boat owners.*

Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
69,541	7,676	77,217	90	10

*C.—Total number of boat employees.*

Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
257,560	29,617	287,177	82	18

## XXXV.—Film Companies.

### Introductory.

1. In Bengal, there are as many as seven film companies and between them they give fairly continuous employment to nearly 900 persons. In addition, they offer casual employment to a much larger number of persons every year. Unfortunately, however, Bengalis have not yet taken full advantage of the opportunities of employment offered by the film industry, as is proved by the fact that even now 46 per cent. of the regular employees in the film companies working in Bengal do not happen to be men of this province.

### An analysis of the Table.

2. The Table at the end shows that while technicians, engineers and clerks are mostly Bengalis (there are only 12 per cent. non-Bengali technicians and engineers and 22 per cent. non-Bengali clerks), there is an appreciable proportion (30 and 36 per cent.) of non-Bengalis in the grades of Directors and Assistant Directors, and of musicians. Coolies and menials are mostly (85 per cent.) non-Bengalis and an appreciable proportion (24 per cent.) of mechanics and mistris also happen to be men who do not have a domicile in this province.

### Qualifications and remunerations of employees.

3. Directors and Assistant Directors are, in a very real sense, the most important section of employees in a film company. On them depend the unity and dramatic cohesion of a film story, and they must be persons with good education and a wide cultural background. The remuneration of Directors and Assistant Directors varies in different companies and ranges from Rs. 150 to Rs. 500 per month plus, occasionally, a commission on the profits of the picture directed.

4. Next in importance are technicians and engineers. A film company requires good cine-photographers, sound engineers, electricians and laboratory assistants. For all these posts, persons with good practical training are preferred. The pay of employees in this grade varies from Rs. 50 to Rs. 400 per month.

5. Then there are mechanics and mistris. These employees, too, must have practical experience in the particular branch in which they seek employment. The pay of mechanics and mistris varies from Rs. 25 to Rs. 75 per month.

6. Finally, there are coolies and menials, musicians and clerks. Musicians are either on a permanent employment roll or are casual employees: so also are coolies and menials. Clerks, on the other hand, are generally always permanent employees. The pay of musicians

varies from Rs 30 to Rs. 75 per month, that of clerks from Rs. 25 to Rs. 100 per month and that of coolies and menials from Rs. 10 to Rs. 25 per month. .

#### **The future and prospects of further employment of Bengalis.**

7. At the present moment, owing to the outbreak of War and the consequent increase in the prices of imported cine-photographic films, the film industry is in difficulties and production has been considerably curtailed by almost every company. This, however, is an abnormal state of affairs. Normally, the Indian film industry has a very bright future before it, as Indian pictures are becoming more and more popular. When the abnormal War situation has cleared up, the film companies at work in Bengal should be able to provide employment to a much larger number of men of this province than they have done so far.

TABLE.

## Employment in Film Companies.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Directors and Assistant Directors ..	26	11	37	70	30
2. Technicians and Engineers .. ..	107	14	121	88	12
3. Mechanics and mistris ..	180	56	236	76	24
4. Coolies and menials ..	49	274	323	15	85
5. Musicians .. ..	62	29	81	64	36
6. Clerks .. ..	65	18	83	78	22
Total ..	479	402	881	54	46

## XXXVI.—Radio Engineering and Radio Technology.

### Introductory.

1. The radio industry has an unlimited scope in our country and quite a large number of radio-trained men can be absorbed in it for years to come. During the last fifteen years there has been a remarkable development of broadcasting in India and people have become more and more radio-minded, with the result that new jobs and new opportunities are being created every day. There is a growing demand for trained men—men who are experts in all aspects of the theoretical and practical side of radio.

### Types of employment available.

2. Firstly, there is the Broadcasting department of the Government of India with its network of broadcasting stations all over the country and technically qualified men are required at each of these stations. The pay of course varies according as one is just a mistri or a fully qualified radio engineer, but the rates of pay compare very favourably with emoluments offered in other Government departments.

3. Secondly, there is scope for persons who want to remain attached to selling firms either as salesmen and designers or as engineer-mechanics. The pay offered varies from firm to firm, but private enquiries show that in Bengal qualified salesmen and designers in radio shops get pays between Rs. 30 to Rs. 150 per month and engineer-mechanics get pays between Rs. 50 to Rs. 250 per month. Those who possess foreign qualifications or have been trained abroad usually get much more.

4. Finally, there is scope for persons who want to start radio supply shops of their own. As the demand for radios is daily on the increase, this trade is not likely to reach the saturation point of profitability for a long time to come. The amount of earnings would of course depend largely on the initiative, enterprise and tenacity of the individual concerned, and no dogmatic generalisation can be made. It can, however, be safely remarked that radio business is more lucrative than many other businesses in which young men generally try their luck.

### Where the requisite training can be had.

5. The most important point to remember is that one must get a thorough training in radio engineering and radio technology before one can aspire to start a career in one of the ways enumerated above. Most of the good institutions which offer thorough training in this line are located in Bombay and of them the most important are (a) the Institute of Radio Technology, Dadar, Bombay, (b) the Radio Electric Institute, Lamington Road, Bombay and (c) the Chicago Radio Institute, Fort, Bombay. In all these institutes, B.Sc.'s of Indian Universities (and sometimes I.Sc.'s) are admitted without any entrance examination but others less qualified must pass a test in Advanced Mathematics and Physics. The courses are from one to four years,

according as one wants to specialise in one or more subjects. Moreover, most of the institutes have arrangements whereby students can also sit for the Radio Communications examination of the City and Guilds Institute, London, and the A.M.I.E.E. examination of the Institute of Electrical Engineers, London. In Calcutta, the George Telegraph Training Institute at Bowbazar Street offers a course on Radio Servicing and Engineering.

6. Those who are more ambitious may go in for the Electrical Technology or Electrical Communication Engineering course of the Indian Institute of Science, Bangalore. Applicants must be graduates in science or engineering of approved universities. The course is from two to three years.

7. Finally, opportunities of a very thorough training exist in England. There are four main branches of training—(a) full training as a qualified engineer, with special knowledge of radio technique in all its aspects of design and operation; (b) training as an engineer in the installation, operation, and upkeep and repair of radio equipment with a good knowledge of theory; (c) training as a mechanic in the repair and maintenance of radio instruments and apparatus and/or including broadcast receiving sets; (d) training as a wireless telegraph operator.

8. Excellent training in (a) above can be had at the Imperial College of Science and Technology, London. In addition, the B.B.C. offers a two-year post-graduate apprenticeship course in broadcasting transmission for students under 25 years of age who have obtained an engineering degree of a British university or its equivalent. Training in (b) can be had at the Marconi School of Wireless Communications, Chelmsford College, Chelmsford, Essex. Only students who have obtained an engineering or Electrical Engineering or Physics degree, or the recognised equivalent are eligible. Training in (c) can be had at the various Polytechnics and Technical Colleges in England, but it is doubtful if the advantages to be gained by attending these courses would warrant the expenditure involved in going from India to England to attend them. Training in (d) may be had at the London Telegraph Training College, Ltd., or at the British School of Telegraphy, Ltd., London, and candidates may qualify for the Postmaster-General's First-Class Certificate of Proficiency.

## XXXVII.—Insurance Companies.

### Introductory.

1. The Annual Report of the Registrar of Joint-Stock Companies shows that there are as many as 300 "insurance companies" in Bengal, but of these nearly a half exist on paper only and even of the remaining 150, at least 100 are in a moribund condition. Decent opportunities of employment exist only in the Calcutta and mofussil branches of the remaining 50 companies. In the present survey, figures have been obtained from 24 of these 50 companies—only those more important having been selected for the purpose.

### An analysis of the Table.

2. The Table at the end shows that these 24 companies provide employment to over 2,400 people, of whom 76 per cent. are Bengalis and the rest are either Europeans or non-Bengali Indians. In the grades of officers, organisers and field staff, and clerks and typists, the percentages of Bengalis are 86, 76 and 92 respectively, and it is only in the grade of menials that non-Bengalis (74 per cent.) preponderate. There are quite a few non-Bengali managers, because some of these companies are under the control of Europeans or non-Bengali Indians and the Directors thereof like to have their own countrymen or provincemen at the head of the office as far as practicable.

### Qualifications and remunerations of employees.

3. The most important person in an insurance company's office is the Manager. He must be a person with wide experience and administrative ability and must have been in insurance business for a large number of years. It is not essential that he should possess the qualifications that are demanded of an actuary or an accountant, but it is desirable that he should understand the general principles of actuarial calculations and accountancy. The pay of Managers and Branch Managers varies from Rs. 250 to Rs. 3,000 per month.

4. The grade of officers includes actuaries, senior accountants and executives. To become a qualified actuary, one has to pass a series of stiff examinations and nobody who does not possess a special aptitude in mathematics and statistics should go in to qualify as an actuary. The examinations are conducted by the Institute of Actuaries, London. Actuaries are very well paid, their remuneration varying from Rs. 300 to Rs. 2,000 per month. Senior accountants should have high qualifications in accountancy and executives should have qualifications in commercial subjects and also possess practical experience. Their pay varies from Rs. 100 to Rs. 1,000 per month.

5. Next come organisers and the field staff—agents and sub-agents of various types. Any person with moderate education, perseverance, self-confidence and pleasing manners can achieve success as an agent or sub-agent. Generally, there is no fixed pay, but only commission on cases secured. As, however, this commission is recurring (i.e., it



accrues to the agent as long as premium is paid by the insured), gradually it swells to a very decent income. Very many field workers are able to earn at least Rs. 1,000 to Rs. 5,000 per annum, while a few exceptionally clever succeed in pushing up their earnings to even Rs. 10,000 per annum. Organisers, on the other hand, enjoy fixed pay varying from Rs. 50 to Rs. 200 per month and they should generally be persons who have achieved a fair degree of success as agents.

6. Finally, there is the large army of clerks and typists. They must be at least matriculates and should preferably have knowledge of typewriting and commercial subjects. The pay varies from Rs. 25 to Rs. 150 per month.

#### **The future and prospects of further employment of Bengalis.**

7. As the figures show, there is already a very decent proportion of Bengalis employed in the offices of insurance companies in Bengal and it would seem that unless business expands, there would be little prospect of further opportunities of employment for men of this province. On the other hand, it may be argued that the field for expansion of insurance business is unlimited: if millions have already profited by insurance, there are millions more who can still profit by it. Viewed from this angle, there is no cause for despair. Any person with moderate education, perseverance, self-confidence and pleasing manners may make out a decent living for himself in the insurance business either as an agent or sub-agent, or as an officer. The main point to remember is that every young man who aspires to get to the top must bear patiently with the period of initial apprenticeship.

## TABLE.

## Employment in Insurance Companies.

(Total of 24 company offices.)

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Managers and Branch Managers ..	28	20	48	58	42
2. Officers .. ..	190	30	220	86	14
3. Organisers and Field staff .. ..	312	98	410	76	24
4. Clerks and typists ..	1,214	104	1,318	92	8
5. Menials .. ..	112	324	436	26	74
Total ..	1,856	576	2,432	76	24

## XXXVIII.—Banks.

### Introductory.

1. It appears from the Annual Report of the Registrar of Joint-Stock Companies, Bengal, that there are as many as 600 "banks" and "loan offices" in Bengal, but of these nearly a half exist on paper only and even of the remaining 300, at least 150 are in a moribund condition. Decent opportunities of employment exist only in the Calcutta branch of the Reserve Bank of India, in the Calcutta and mofussil branches of the Imperial Bank of India and in about 30 other fairly important and stable joint-stock banks at work in Bengal. In the present survey, figures have been obtained for these 30 banks and are given in the Table at the end.

### An analysis of the Table.

2. These 30 banks (figures of the Bengal branches of the Reserve Bank of India and the Imperial Bank of India are not included) give employment to nearly 3,500 people of whom 65 per cent. are Bengalis and the rest are non-Bengalis (either Europeans or men of other Indian provinces). Non-Bengalis preponderate in the grades of—

- (a) managers and senior officers (43 per cent.),
- (b) junior officers and supervisors (47 per cent.), and
- (c) menials (87 per cent.).

The large number of non-Bengalis in the grades of (a) managers and senior officers and (b) junior officers and supervisors is accounted for by the fact that most of these 30 banks under review are either European or non-Bengali banks and, as a matter of policy, they want to retain on their staff as large a proportion of their own countrymen or provincemen (as the case may be) as possible. It is only in recent years that in some of the European banks a few of the superior posts have been thrown open to Indians: even so, the position is anything but satisfactory, as the figures eloquently speak.

### Opportunities of employment in the Reserve Bank of India.

3. Before we start to state what the opportunities of employment are in the larger joint-stock banks at work in Bengal, we may describe separately what scope is offered by the Reserve Bank of India and the Imperial Bank of India. Roughly speaking there are four classes of employees in the Reserve Bank of India. In Class A (Officers), the scale of pay is Rs. 250—25—500 E.B.—35—850, with opportunities of promotion to the grade of Managers. Except in the case of recruits of European domicile, or officers recruited on special contracts, appointments to this class are ordinarily made by promotion from Class B. In Class B (Superintendents and clerical staff), the pay varies from Rs. 45 to Rs. 500 per month. Candidates must be at least matriculates of an

Indian university and the maximum age limit for under-graduates is 22 years and for graduates 25 years. In Class C (Treasurers and their staff), the pay varies from Rs. 40 to Rs. 750 per month and in Class D (Subordinate staff), the pay varies from Rs. 13 to Rs. 40 per month. There are no prescribed minimum qualifications for entrant to Classes C and D. Ordinarily direct recruitment is confined to Class B only: vacancies are advertised periodically by the Branch Managers who make appointments from amongst the applicants after holding a preliminary competitive examination.

#### **Opportunities of employment in the Imperial Bank of India.**

4. We next come to the Imperial Bank of India. Agents and Sub-Agents of the various branches and sub-branches of this Bank are now-a-days appointed by promotion from the subordinate staff, direct appointments being made only in the case of European officers who are recruited from Great Britain. The scales of pay vary from Rs. 225 to Rs. 350 per month for Sub-Agents and from Rs. 420 to Rs. 1,800 per month for Agents. Other officers get pay from Rs. 450 to Rs. 1,800 per month and are recruited in the same manner as Agents and Sub-Agents. Then there is the clerical grade (pay varying from Rs. 36 to Rs. 180 per month), recruitment to which is made by competitive examination, preference being normally given to sons and relatives of retired employees of the Bank. Finally, there are appointments in the cash department for those who want to start as cashiers, pottars, etc., recruitment is generally made by selection.

#### **Qualifications and remunerations of employees in other banks.**

5. Managers and superior officers in European banks get very high scales of pay, varying from Rs. 400 to Rs. 3,500 per month. They are mostly persons with high practical qualifications in banking, accountancy or business administration. In Indian banks also managers and superior officers must possess equally high qualifications, but the pay scales are much lower, varying from Rs. 200 to Rs. 1,500 per month. Managers and superior officers are seldom recruited direct: they are mostly persons promoted from the grade of junior officers and supervisors.

6. Junior officers and supervisors also must possess practical qualification in banking, accountancy or business administration. In European banks, the pay of such employees varies from Rs. 250 to Rs. 750 per month and in Indian banks, their pay varies from Rs. 75 to Rs. 250 per month.

7. The largest number of employees in banks are clerks and typists. They must be at least matriculates and should preferably know typewriting and commercial correspondence. Most banks maintain a waiting list of applicants, from which recruitments are made either by selection or by competitive examination. Generally speaking some preference is given to sons and relatives of employees and ex-employees of the bank concerned. The pay varies from Rs. 25 to Rs. 250 per month.

8. Finally, there is the large army of menials. They must be persons with good physique and of perfect integrity. Ex-soldiers are often appointed to this grade. The pay varies from Rs. 15 to Rs. 50 per month.

#### **The future and prospects of further employment of Bengalis.**

9. As has been remarked already, the comparative paucity of Bengalis in the grades of (a) managers and senior officers and (b) junior officers and supervisors is due to the fact (that most of the important banks at work in Bengal are under European or non-Bengali control and, as a matter of policy, the Managers thereof want to retain a fairly decent percentage of their own countrymen or provincemen on their staff. Although in recent years a few European banks have thrown open some of the superior posts to suitably qualified Indians, the situation is still anything but satisfactory and there is room for a good deal more of Indianisation and, if we may coin a word, Bengalisation.

10. On the other hand, it should be emphasised that success in banking as a career depends on many other factors besides academic qualifications. In banking, more than in other walks of life, success depends on honesty, integrity, capacity for hard work and, above all, initiative. A mere knowledge of theoretical economics or of the principles of banking does not make one a good bank official: what is required is a fairly long period of apprenticeship in a bank coupled with practical knowledge of accountancy and banking administration.

TABLE.

## Employment in Banks.

(Total of 30 bank offices.)

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1. Managers and Senior Officers.	36	27	63	57	43
2. Junior Officers and Supervisors.	123	108	231	53	47
3. Clerks and typists ..	1,952	168	2,120	92	8
4. Menials .. ..	141	912	1,053	13	87
Total ..	2,252	1,215	3,467	65	35

**PART III.**

**Miscellaneous Organisations.**

## Part III.—Miscellaneous Organisations.

### XXXIX.—Calcutta Fire Brigade.

1. The head of the Brigade is the Chief Officer who is a member of the Institute of Fire Engineers in the scale of pay of Rs. 800—25—1,000. He is assisted by the following officers in the scales of pay noted against each:—

	Scale of pay.
	Rs.
Second Officer	... 450—25—600
Chief Engineer	... 375—15—450
Station Officers	... 300—10—400
Engineers	... 250—5—300
Firemen	... 200—5—250
Wirehouse Inspectors	... 300—10—400

2. Recruitment to the above mentioned grades is made by advertisement. Candidates have to join the Brigade as Firemen without any previous training and after having been in service for some years and having had sufficient training and experience they are gradually promoted to the upper grades.

3. Formerly Firemen were recruited from members of the Army, holding Second Class Army Certificates. Now as the service is being Indianised the minimum qualifications prescribed for appointment as a fireman is that the applicant must be at least an I.A. or I.Sc. and must have strong physique, with a height of 5 ft. 8 inches and a normal chest of 36 inches.

4. Besides the above, there is the Engineering Section consisting of Indian Drivers, Head Tindal, Tindals, Carpenters, Mistris, Fitters and Blacksmiths. No academic qualification is required, but candidates must be of strong physique. Recruitment to this section is done on the spot by enrolment. The pay-scales are as follows:—

	Rs.
Indian Drivers	... 80—4—100
Head Tindal	... 50—2—60
Tindals	... { 40—1—45 30—1—40
Khalasis	... 20—20—1—25—1—30
Carpenter and lathe mistri	... 70—2—90
Fitter, blacksmith, tinsmith, etc.	... 40 to 60



5. The office staff consists of a Head Clerk, one cashier, three clerks and one store-keeper. Their pay ranges from Rs. 40 to Rs. 150 per month. Recruitment is done on the spot by enrolment as in the Engineering section mentioned above.

6. In conclusion, it may be pointed out that educated Bengali young men have hitherto taken very little interest in the various types of employment available under the Calcutta Fire Brigade. All the drivers, tindals and khalasis in the Engineering section are non-Bengali Indians and in the officers' section most of the officers are either Europeans or Anglo-Indians. It appears that the nature of work in the Calcutta Fire Brigade has so far failed to attract suitable Bengali young men, but it is hoped that when vacancies occur in future they would show better enterprise and energy.

## XL.—Calcutta Society for the Prevention of Cruelty to Animals.

The Secretary-Superintendent is the executive head of the Calcutta Society for the Prevention of Cruelty to Animals which has its office at 276, Bowbazar Street, Calcutta. He is assisted by the following staff:—

### 1. Assistant Superintendent.

A candidate for employment as Assistant Superintendent must be between 22 and 30 years. He must be a Veterinary graduate. The pay of the officer is Rs. 200 per month.

### 2. Inspectors.

There are two classes of Inspectors—one on Rs. 100 per month and the other on Rs. 80 per month. In the former class candidates must be Veterinary graduates, and in the case of Anglo-Indians, they must be Matriculates or Senior Cambridge certificate holders. They are also required to ride motor cycle. In the latter class candidates must be Veterinary graduates. Officers of both these classes get a conveyance allowance of Rs. 10 per month. Candidates should preferably be between 22 and 30 years of age.

### 3. Agents.

There are three classes of Agents—on Rs. 65, Rs. 55 and Rs. 45 respectively plus a cycle allowance of Rs. 5. Candidates must be at least Matriculates and between 22 and 30 years of age.

Besides the Assistant Superintendent, Inspectors and Agents there is a Veterinary Surgeon in charge of the Hospital and quarters and an Assistant Veterinary Surgeon in charge of the Hospital. Their pays are Rs. 100 and Rs. 45 per month respectively. They must be Veterinary graduates.

### Rules of recruitment.

When there are vacancies, applicants who must apply on the Society's prescribed application form are called up for interview with the Secretary and those who appear suitable in age, physique, general appearance and education are sent up for examination by the Society's Medical Officer. Candidates must have good eye-sight: as a matter of fact they are all required to pass the sight test without glasses. Those who are found to be medically fit are appointed, in the first instance, on probation for six months. Uniforms and waterproofs with distinguishing numbers are supplied by the Society to the staff.

## XLI.—Gas Companies.

### Introductory.

1. There are three gas companies in Bengal and between them they employ nearly 1,500 people. Of them, however, only 15 per cent. happen to be men of this province and the others are all non-Bengalis.

### An analysis of the Table.

2. The Table at the end shows that all the Managers and Covenanted officers are non-Bengalis. As a matter of fact, they are all Europeans. This is so because all the three gas companies working in Bengal are European concerns. There are quite a few (54 per cent.) Bengalis in the grade of Supervisors, but in the ranks of mistris and skilled workers, and unskilled labourers and menials, the percentages of Bengalis are only 25 and 5.

### Qualifications and remunerations of employees.

3. Employees in the grade of Supervisors generally possess some knowledge of engineering, but very few of them are men passed from an engineering college or school. On the contrary, they are mostly men who started as mistris and then gradually worked their way up because of their superior ability and intelligence. Their pay ranges from Rs. 50 to Rs. 200 per month.

4. The most important employees in gas companies are the mistris and skilled workers. Generally speaking, men get promoted from the unskilled to the semi-skilled and then to the skilled classes. Those who are more intelligent and efficient get promoted in this manner. The pay in this grade varies from Rs. 20 to Rs. 60 per month.

5. Finally, there is the large army of unskilled labourers and menials. They are all illiterate and their only qualifications are that they have a strong physique and are willing to do any type of manual work. Their pay ranges from Rs. 14 to Rs. 30 per month.

### The future and prospects of further employment of Bengalis.

6. The large number of non-Bengali employees in this trade is due to the fact that when the first gas company was started in Bengal, Bengalis could not be induced to work as pipe fitters, jointers, etc. The Oriyas then proved to be the most suitable type available and were readily recruited; and now they have established a kind of virtual monopoly of employment in gas factories. There is, however, no reason why Bengalis also will not prove equally capable as mistris and skilled workers. Already in two of the companies, a number of Bengali workers are being trained up and the reports that have been received about their efficiency and ability to adapt themselves to work in gas companies are very encouraging. It is hoped that in future recruitments all gas company managers will give proper facilities to Bengali workers and that Bengali young men also would shake off their age-old apathy and prejudice and take up in real earnest work in gas companies.

TABLE.

## Employment in Gas Companies.

	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
Managers and Covenanted Officers.	..	3	3	..	100
Supervisors ..	50	42	92	54	46
Mistris and skilled workers	122	370	492	25	75
Unskilled labourers and menials ..	40	838	878	5	95
Clerks .. ..	13	2	15	87	13
<b>Total ..</b>	<b>225</b>	<b>1,255</b>	<b>1,480</b>	<b>15</b>	<b>85</b>

## XLII.—Steamship Companies.

### Introductory.

1. Bengal is a land of rivers and the steamers that ply along them as well as the offices of the various steamship companies offer opportunities of employment to a very large number of people. The two most important inland steamer companies are the R. S. N. Co., Ltd., and the I. G. N. & Ry. Co., Ltd., managed by Messrs. Macneill and Company and Kilburn and Company respectively of 2, Fairlie Place, Calcutta. Then there is the British India Steam Navigation Company managed by Messrs. Mackinon, Mackenzie and Company of 16, Strand Road, Calcutta. Finally, there are a few landing and shipping companies affiliated to the Calcutta River Transport Association, Royal Exchange, Calcutta.

### Classes of employees, their qualifications and remunerations.

2. There are three main branches in which employment can be secured—(a) the Agency and Traffic section, (b) the Marine department, and (c) the Engineering department. We may consider the state of employment in each branch separately.

3. In the Agency and Traffic Section, there are the departmental heads and below them are the agents, covenanted officers and godown superintendents. At present, these employees are almost all Europeans, enjoying salaries ranging from Rs. 300 to Rs. 2,000 per month. Generally speaking, they are selected in the United Kingdom, without examination, their education, references and general bearing being taken into account.

4. Then come the uncovenanted traffic assistants, and clerks. These are mostly Bengalis, but there are quite a few Anglo-Indians in the grade of uncovenanted traffic assistants. The pay of uncovenanted traffic assistants ranges from Rs. 75 to Rs. 500 per month, and that of clerks from Rs. 20 to Rs. 400 per month, according to qualifications, seniority and experience. For none of these posts are any special technical qualifications required.

5. In the Marine department, the officers at the top are the Marine Officers, who again are mostly Europeans with pays ranging from Rs. 300 to Rs. 2,000 per month. Generally speaking, they are recruited in the United Kingdom or through the medium of the I.M.M.T.S. "Dufferin". They should generally possess a Master or a Mate's certificate.

6. Next come the Masters, about 75 per cent. of whom are Bengalis. Their pay ranges from Rs. 50 to Rs. 250 per month and they, too, must possess a Master or a Mate's certificate.

7. Finally, there is the large marine crew staff consisting of serangs, lascars, sukhanis, tindals, firemen, manjhis, dandis, pilots, lightmen and workmen. They are mostly Bengalis. Serangs must possess Government certificates of competency and are paid anything between Rs. 30 to Rs. 75 per month. They are generally promoted

from sukhanis after obtaining certificate and by seniority and ability. Sukhanis (pay Rs. 15 to Rs. 35 per month), on the other hand, have only practical knowledge and experience of service as lascars (pay Rs. 15 to Rs. 22 per month). Tindals, firemen, manjhis, dandis, pilots, lightmen and workmen must all possess practical knowledge and experience and are paid at rates varying from Rs. 15 to Rs. 35 per month.

8. In the Engineering department, the officers at the top are the Engineers, who again are mostly Europeans, with pays ranging from Rs. 500 to Rs. 2,200 per month. They must possess an Engineer's certificate as prescribed by the Indian Mercantile Marine Rules.

9. Below the covenanted engineers are the junior engineers about 25 per cent. of whom are Bengalis and the rest are Europeans and Anglo-Indians. Their pay ranges from Rs. 250 to Rs. 850 per month. They, too, should possess the prescribed Engineer's certificate or at least should have practical knowledge of marine engineering.

10. Below the engineers are the mistris, engine room drivers and engine room crew. About 85 per cent. of these employees are Bengalis and their monthly pay ranges as follows: (a) mistris, from Rs. 30 to Rs. 150; (b) engine room drivers, from Rs. 45 to Rs. 175; (c) engine room crew, from Rs. 20 to Rs. 35. Drivers must possess the Government certificate of competency, but others need only have practical knowledge and experience.

### **The future and prospects of further employment of Bengalis.**

11. The superior personnel of all the three branches of the various steamship companies now at work in Bengal at present consists almost exclusively of Europeans and it should be possible for qualified Indians to secure employment in these grades as future vacancies occur. A certain percentage of this staff may have to remain European for a considerable time to come, but there is no reason why the entire personnel should remain European. The main difficulty, however, lies in getting suitable Bengali young men possessing the requisite qualifications. For most of these posts, a Master or a Mate or an Engineer's certificate is essential and there are few Bengalis who possess one of these certificates. These certificates are granted, in India, by the Commerce Department of the Government of India and, in Great Britain, by the Board of Trade. In India examinations are held every year for this purpose at the Mercantile Marine Offices at Bombay, Calcutta and Madras, and enterprising Bengali young men would do well to acquire the necessary practical knowledge before they sit for examinations leading to these certificates.

12. Unemployed Bengali lads may also eke out careers for themselves in subordinate grades, i.e., as masters, serangs, sukhanis, lascars, tindals, pilots, drivers and mistris. At present employees in this grade are practically all illiterate or semi-literate men from the river districts of Bengal. As the pays offered are by no means unattractive, educated young men should seek employment in these types of work as well, and in course of time they may prove themselves to be more efficient than the present illiterate or semi-literate employees.

## XLIII.—Telephone Companies.

### Introductory.

1. There are two types of Telephone service in Bengal—those maintained by Government and those maintained by a private company, viz., the Bengal Telephone Corporation, Limited, of 8, Hare Street, Calcutta. The services maintained by Government include Trunk, Regent, Barrackpore, West and Alipore Exchanges and are under the control of the Department of Posts and Telegraphs, Government of India. Recruitment to various grades is made according to rules laid down by that department and particulars will be found in Part III of Volume I of the Handbook on Avenues of Employment. Regarding recruitment under the Bengal Telephone Corporation, Limited, particulars are given below.

### Employment under the Bengal Telephone Corporation, Limited.

2. Under the Bengal Telephone Corporation, Limited, there are nearly 1,200 employees (including about 300 girls), of whom 25 per cent. are Bengalis and the rest are either Europeans, Anglo-Indians or non-Bengali Indians. Non-Bengalis preponderate among the executive staff, operating staff, engineering labour staff and office menial staff. In the operating staff, most of the employees are Anglo-Indian girls, as hitherto Bengali girls have not cared to come forward to work as telephone operators. In the engineering labour staff also, non-Bengalis preponderate because Bengali lads have not generally been keen on getting an employment in this section. As the following rules of recruitment will show, nothing prevents suitable Bengali boys and girls from applying for posts in these grades and in future vacancies it should be possible for a larger number of them to get in.

### Rules of recruitment to the various grades.

3. Employees of the Bengal Telephone Corporation, Limited, may be broadly classified into the following grades—(a) Executive; (b) executive subordinate; (c) operating; (d) office; (e) engineering; (f) engineering labour; and (g) menials. The rules of recruitment with regard to each of these grades, except the executive grade which consists of Europeans only, are given below.

#### (a) Executive Subordinate Staff.

These are selected posts usually filled in by promotion and there is no general scale of pay for them. The pay is fixed on individual merit and ranges from Rs. 400 to Rs. 700 per month.

#### (b) Operating Staff.

Operators are recruited directly after a test examination of merit from unmarried girl candidates of age between 16 and 19 years. The minimum qualification required is Matriculation for Indian girls and education equivalent to the Middle School code for Anglo-Indian girls. Their height, without shoes, must not be less than 5 ft. 1 inch.

The scale of pay is Rs. 40 per month while under training. That for Operators is Rs. 70 per month while on probation, and Rs. 70—10—140 after confirmation. The scale of pay for Supervisors is Rs. 150—10—180 and for Lady Superintendents between Rs. 200 and Rs. 400. The latter posts are filled in by promotion.

### (c) Office Staff.

The minimum qualification is ordinarily Matriculation, and in some cases knowledge of stenography and accounts. There is no hard and fast rule about age limit, but decent young men are chosen.

The scales of pay are as follows:—

	Rs.
(a) Junior Clerks	... 30—5—50.
(b) Senior Clerks	... 60—5—90.
(c) Stenographers	... 100—5—150—10—180.

There are other selected posts generally filled in by promotion and their pay ranges from Rs. 100 to Rs. 400.

### (d) Engineering Staff.

They are recruited from candidates who come from Engineering Schools and Colleges and from Apprentices who have completed their course of study in any recognised Workshop, and also by promotion from the paid Learners and Apprentices employed in the Company's own Workshop. Usually posts in the higher grades are filled in by promotion from amongst the staff.

There is no age limit, but decent young men are chosen and no one under 18 years of age is employed. The scales of pay are as follows:—

	Rs.
(a) Learners	... 20—1—22.
(b) Line Inspectors, Class I	... 140—10—230.
(c) Line Inspectors, Class II	... 97/8/—7/8/—135.
(d) Assistant Line Inspectors	... 55—5—90.
(e) Jointers	... 150—10—250.
(f) Assistant Jointers	... 87/8/—7/8/—140.
(g) Apprentice Jointers	... 50—5—80.
(h) Indian Jointers—	
Class I	... 50—5—100.
Class II	... 32—2—50.
(i) Jointers' Mates	... 23—1—30.
(j) Exchange Inspectors and Test Clerks—	
Class I	... 150—10—230.
Class II	... 107/8—7/8—145.
Class III	... 70—5—100.



**(k) Instrument Inspectors—**

	Rs.
Class I	... 170—10—230.
Class II	... 132—8/8/—166.
Class III	... 97/8—7/8/—127/8.
Class IV	... 75—5—90.
Class V	... 51/8—4/8/—69/8.
Class VI	... 27—4—47.
(l) Apprentices	... 25—5—50.
(m) Installation Superintendents	... 140—10—230.
(n) Installation Inspectors	... 97/8—7/8/—135.
(o) Assistant Installation Inspectors	... 55—5—90.

**(e) Engineering Labour Staff.**

In recruiting labour staff, the first appointment is always as Coolies, and they are gradually placed in different branches of work to qualify themselves for the upper classes of employment such as Head Coolies, Faultsmen, Wiremen, Fitters, Switchboard Wiremen, Foremen, Jointers' Mates, Indian Jointers, etc. Only decent young men with good physique are chosen, without any age limit.

The scales of pay are as follows:—

	Rs.
(a) Coolies, temporary	... 12 per working day.
	... 20 (fixed) on confirmation.
(b) Head Coolies	... 21—1—22.
(c) Fitters	} ... 24—1—27—2—37.
Wiremen	
Faultsmen	
(d) Runners	... 20—2—26.
(e) Instrument Repairers	... 22—2—32.
(f) Foremen	... 40—4—80.
(g) Sw/Bd. Wiremen, Class I	... 40—2—64.
Sw/Bd. Wiremen, Class II	... 30—2—38.
(h) P. B. X. Fitters	... 40—2—64.
(i) Machine Polishers	... 22—2—32.
(j) Cordmen	... 20—1—22.

**(f) Office Menials.**

They are recruited direct and consideration is mainly given to young men with good physique. The scales of pay are as follows:—

	Rs.
(a) Bearers	... 17—1—20.
(b) Durwans	... 18—1—24.
(c) Sweepers and Cleaners	... 17.

**PART IV.**  
**Agriculture.**

## Part IV.—Agriculture.

### XLIV.—Agriculture and Farming.

#### Introductory.

1. It is well-known that more than three-fourths of the people of this province earn their livelihood from land (agricultural and allied operations). Now, for many years to come a very considerable section of them must continue to make their living out of agriculture, farming and such small industries as are directly connected with agriculture. This must be so, because even if it were possible to replace all the non-Bengalis now employed in industry and trade by Bengalis, the substitution can give employment to but a very small percentage of the total adult population. Also, even if the total number of mills and factories now at work in Bengal could, say, be doubled, the new opportunities of employment thereby created would absorb only another very small percentage of the total adult population. The conclusion is, therefore, irresistible that a considerable proportion of our unemployed young men must, in their own interest, seek a career in better agriculture and better farming.

#### Better agriculture and better farming.

2. Of course in order to get a decent return for capital and enterprise invested, the present methods of agriculture and farming, as followed by illiterate cultivators, will have to be substantially altered. The area cultivated by *bhadralog* farmers must be much larger than the present average holding in Bengal; it must contain all kinds of land, high and low, making it possible for them to carry on cultivation throughout the year and to have a judicious rotation of crops; it must also be conveniently situated in respect of markets. Moreover, *bhadralog* farmers must seek to have supplementary earnings from such occupations as horticulture, poultry-farming, dairy-farming, etc. It is only by working in the above manner and by making the fullest use of the available time and opportunity that agriculture and farming can be made really paying. Finally, *bhadralog* farmers must live on the farm itself and be prepared to do any incidental manual work with their own hands, should such a necessity arise.

#### Lessons of some *bhadralog* agricultural and farming colonies in Bengal.

3. From time to time both Government and private gentlemen have tried to set up *bhadralog* young men on land, but so far these "projects" have not been attended with much success. The two most important Government projects are the *bhadralog* agricultural colonies in Kolechhari Swasthal and Char Coronation in the Madaripur subdivision of the Faridpur district and in Char Fasson in the Bhola subdivision of the Bakerganj district. Among non-official efforts, mention may be made of the agricultural farm at Barrackpore, started by Mr. J. N.

Gupta, I.C.S. (Retd.), the Sriniketan scheme at Surul, Birbhum, and the Gosaba experiment (of the late Sir Daniel Hamilton) in the Sundarban areas, besides a number of small, isolated efforts here and there. Now, the official experiments have not been much of a success for three principal reasons. Firstly, the young men who were selected for settlement on these lands were not happily selected. In both the areas, political considerations were uppermost and sufficient attention was not paid to whether the selected young men could ever become good farmers. Secondly, the preliminary agricultural training that was given to these amateur farmers was most inadequate. Thirdly, the farms selected were in areas far removed from available markets, with the result that these "farmers" had little opportunity of selling their products to consumers. The result has been that, in spite of official encouragement and help in many forms, the *bhadralog* colonies started by Government have not proved to be very successful.

#### **Farms can, however, be run successfully by *bhadralog* young men.**

4. Notwithstanding the above record, it is still possible to have farms run successfully by *bhadralog* young men, if only the mistakes mentioned in the preceding paragraph are not repeated. First of all, it is necessary that the land should be reasonably large in size. Secondly, *bhadralog* farmers must be prepared to make a decent initial capital outlay for a living house, a bullock shed, a godown, implements, bullocks and a tank. On each such land may be set up two men who have had thorough practical training in one of the higher grade agricultural institutes (Dacca or Daulatpur) and who are really keen on becoming practical farmers. The land should be conveniently situated in respect of markets and the youngmen so set up should be encouraged to take to subsidiary occupations like the manufacture of ghee and butter (especially during seasons when milk is cheap), fishery, poultry-farming and the growing of fruits and flowers. With a suitable rotation of crops, such a farm can yield a substantial net profit every year.

#### **Dairy farming by *bhadralog* youths.**

5. Then there are areas where *bhadralog* young men can make a living by starting small scale dairy farms. Here also, land would be required for each farm and capital outlay would be needed for a living house, a cattle shed, a godown, cows, a tank and ordinary dairy equipments and appliances. The two young men settled on each such dairy farm may also cultivate the fodder, say, napier grass, on the farm itself and also take to the manufacture of butter and ghee by buying cheap milk in the villages during certain seasons.

#### **Horticultural farming by *bhadralog* youths.**

6. Finally, *bhadralog* youngmen may also engage themselves exclusively in horticultural farming. For this a reasonable area comprising both high land and low land would be required. There will also be the usual capital outlay for a living house, a cattle shed, a

godown, bullocks, a tank and implements. On part of the land may be grown such fruit crops as bananas (with ginger and turmeric as catch crops), cocoanuts (with vegetables as catch crops), lemons (with vegetables, ginger and turmeric as catch crops), and papayas (with pine-apples as catch crops). On the remainder of the land may be grown field crops like paddy, sunn-hemp and napier grass. Profit will begin to accrue from the second year and would gradually increase every subsequent year.

#### Where the requisite training can be had.

7. In Bengal, the two most important centres where the requisite training in agriculture, horticulture and dairy farming can be had are in the Secondary Agricultural School, Dacca, and the Daulatpur Agricultural Institute, Daulatpur, Khulna. At Dacca, the minimum educational qualification required of candidates is a pass certificate from Class VIII of a High English School, or its equivalent from a Normal School. They must be of strong physique and between 17 and 20 years of age. The course extends over a period of two years. At Daulatpur, candidates must be at least I.Sc.'s and the course is for two years. An Agricultural Institute is also going to be shortly established at Dacca, and the chief course there will be for the degree of B.Ag. in Agriculture and Animal Husbandry, necessitating two years' study in the basic sciences at the Dacca University under the Faculty of Agriculture.

8. There is another such institution in Bengal—the Basanta Kumar Agricultural Institute, Rajshahi. Candidates must be at least Matriculates or I.Sc.'s. For the former, the course is four years and for the latter the course is for two years only. Instruction is given in agriculture, horticulture, dairy farming, poultry farming and cigar-making.

9. Those who want to get practical training in dairy farming only can do so, by special arrangement, at either the Calcutta or the Darjeeling branches of Messrs. E. Keventer, Ltd. It has been ascertained that an ordinary Matriculate lad will need to have at least two to three months' practical training before he can consider himself sufficiently equipped with the minimum necessary knowledge about dairy farming.

10. Those who are interested in poultry farming may get the necessary training in a private farm like that of Messrs. Globe Nursery of Dum Dum, 24-Parganas, or in the Poultry Training Classes of the United Provinces Poultry Association, Lucknow. In this latter place, three types of courses are available, elementary advance and diploma, the period of training ranging from three months to one year.

11. A word about degrees in Agriculture available at certain Indian universities. Those who want to start as farmers would do well not to go in for any degree in agriculture, but to concentrate their energies on getting practical training at one of the institutions mentioned above. Similarly it is no use potential *bhadralog* farmers going in for advanced study either at the Imperial Agricultural Research Institute, New Delhi, or at the Imperial Dairy Institute, Bangalore. One may go in for these advanced studies only after having acquired sufficient practical training on a farm.

### The future.

12. As has been already emphasised, more and more of our *bhadralog* young will have to take to farming and agriculture as a profession owing to sheer economic necessity, as it will never be possible for either mills and factories or Government and semi-Government services to absorb the very large number of young men who are coming out of schools and colleges every year. The record of past failure encountered by some young men in the matter of making a living out of land should not discourage others, because, as we have seen, the schemes inaugurated so far were not scientifically planned and men of the right type were not always selected to work out those schemes. First and foremost, it is necessary that ordinarily only such young men as are the sons of *bona fide* cultivators or have a direct interest in land should take to agriculture and farming as a profession. Secondly, they must have a thorough practical training in agriculture and farming methods before they settle down on land. Thirdly, they must actually live in villages on their farms, notwithstanding the lesser amenities of life there. Finally, the areas they settle on must contain land of such type as is required for the carrying on of efficient farming; and they must also be suitably situated with reference to markets. If these conditions are satisfied and if the necessary initial capital outlay can be met from some source, enterprising young men will be able to make as decent a living out of land as they now do as clerks in an office or as workmen operatives in a mill or factory.

## **Appendices.**

## APPENDIX A.

### Consolidated figures of employment in Bengal.

Serial No.	Name of Industry or trade.	Bengalis.	Non-Bengalis.	Total.	Percentage of Bengalis.	Percentage of non-Bengalis.
1	Cotton Mills .. ..	18,740	12,541	31,281	60	40
2	Jute Mills .. ..	49,068	154,149	203,817	24	76
3	Cotton and Jute Presses .. ..	18,692	11,984	30,676	61	39
4	Paper Mills .. ..	2,541	4,628	7,169	35	65
5	Rubber Factories .. ..	2,420	1,924	4,344	56	44
6	Glass Factories .. ..	367	1,981	2,348	16	84
7	Cement, Lime and Pottery Factories	2,616	1,429	4,045	65	35
8	Aerated Waters and Ice Factories ..	136	772	908	15	85
9	Battery and Dry Cell Factories ..	255	663	918	28	72
10	Pen and Pencil Factories .. ..	530	302	832	64	36
11	Salt Factories .. ..	332	52	384	86	14
12	Aluminium and Enamel Works ..	1,074	1,656	2,730	39	61
13	Leather and Shoe Factories ..	2,751	1,312	4,063	68	32
14	Paint, Colour and Varnish Works ..	690	1,024	1,714	40	60
15	Chemical and Pharmaceutical Works	3,264	2,211	5,475	60	40
16	Soap Works .. ..	583	537	1,120	52	48
17	Kerosene and Petrol Installations ..	1,072	808	1,880	57	43
18	Fan and Electric Works .. ..	1,179	396	1,575	75	25
19	Match Factories .. ..	1,596	2,978	4,574	35	65
20	General Engineering Workshops ..	19,936	15,769	35,705	56	44
21	Electric Supply Companies .. ..	1,774	3,452	5,226	34	66
22	Silk Mills .. ..	555	1,693	2,248	25	75
23	Sugar Mills .. ..	947	1,219	2,166	44	56
24	Tea Estates .. ..	4,596*	86,952*	91,548	5*	95*
25	Collieries .. ..	14,727	10,412	25,139	59	41
26	Plumbing trade .. ..	72	1,570	1,642	5	95
27	Automobile Engineering Workshops ..	1,074	538	1,612	67	33
28	Motor Transport Business .. ..	11,340	24,741	36,081	31	69
29	River Transport Business .. ..	327,101	37,293	364,394	90	10
30	Film Companies .. ..	479	402	881	54	46
31	Insurance Companies .. ..	1,856	576	2,432	76	24
32	Banks .. ..	2,252	1,215	3,467	65	35
33	Gas Companies .. ..	225	1,255	1,480	15	85

\*Hill-men have been counted as non-Bengalis, but strictly speaking they should be counted as Bengalis. Please see the section on "Tea Estates".



**APPENDIX II.****1. Cotton Mills.***24-Parganas.*

1. Kesoram Cotton Mills, 42, Garden Reach.
2. Dunbar Cotton Mills, Nos. 1, 2 and 3, Shamnagar, P. O. Garulia.
3. Dunbar Cotton Mill, No. 4 (Ring), Shamnagar, P. O. Garulia.
4. Mahalaxmi Cotton Mill, Palta, P. O. Ichapur-Nawabganj.
5. Bangodaya Cotton Mill, P. O. Panihati.
6. Basanti Cotton Mill, P. O. Panihati.
7. Banga Sri Cotton Mill, Sodepur, P. O. Sukchar.
8. Vidyasagore Cotton Mill, P. O. Sodepore.
9. Mohini Mills, Ltd. (No. 2), Belghuriah, P. O. Belghuriah.

*Khulna.*

10. Acharya Profulla Chandra Cotton Mills, Ltd., Khulna.

*Nadia.*

11. Mohini Cotton Mills, P. O. Kushtia Bazar.

*Howrah.*

12. Bowreah Cotton Mills (Ring Mill), P. O. Bowreah.
13. The Shree Radha Krishna Cotton Mills, No. 1, 122, Old Ghusuri Road, P. O. Salkia.
14. The Victoria Cotton Mills, Ghusury, P. O. Salkia.
15. New Industries, Ltd., Works, Grand Trunk Road (North), Salkia.
16. Sree Radha Krishna Cotton Mills, No. 2, 93, Girish Ghose Street, Belur.
17. The East India Cotton Mills, Ltd., Mourigram, P. O. Andul Mauri.
18. Cotton Wick and Tape Factory, Kumarpara, Lillooah.
19. Belur Engineering and Braiding Works, 79, Grand Trunk Road, P. O. Belur.
20. Shree Hanuman Cotton Mills, Co., Fuleshwar, P. O. Ulubaria.

*Hooghly.*

21. Bengal Luxmi Cotton Mill, Mahesh, P. O. Serampore.
22. Rampooria Cotton Mill, Mahesh, P. O. Serampore.
23. Bengal Belting Works, 25, Bosepara Lane, Mahesh, P. O. Rishra.
24. Bangeswari Cotton Mill, P. O. Rishra.
25. Hooghly Cotton Mill, P. O. Rishra.
26. Sri Durga Cotton Mill, P. O. Konnagar.

*Dacca.*

27. The Dhakeswari Cotton Mills, Ltd., Dhamgarh, P. O. Dhakeswari Mill.
28. Luxmi Narayan Cotton Mills, Ltd., Godnyle, Narayanganj.
29. The Chittaranjan Cotton Mills, Ltd., Godnail, P. O. Narayanganj.
30. The Dhakesware Cotton Mills, Ltd., No. 2 Mills, Godnyle, P. O. Lakhinarayan Mills, Narayanganj.
31. Luxmi Spinning and Weaving Mills, Ltd., Naliganj, P. O. Bandar.
32. The Dacca Cotton Mills, Ltd., Postogollah, P. O. Faridabad, Dacca.

**2. Jute Mills.***2A-Parganas.*

1. Budge Budge Jute Mill, No. 1, Budge Budge.
2. Budge Budge Jute Mill, No. 2, Budge Budge.
3. Barnagar South Jute Mill, Alambazar.
4. Barnagar East Jute Mill, Alambazar.
5. Kamarhati Jute Mill, "A", Kamarhati.
6. Kamarhati Jute Mill, "B", Kamarhati.
7. Old Clive Mill, 43-1, Garden Reach.
8. New Clive Mill, 43-1, Garden Reach.
9. Hooghly Jute Mill (Upper), 9, Garden Reach.
10. Shamnuggur South Jute Mill, No. 1, P. O. Garulia.
11. Shamnuggur South Jute Mill, No. 2, P. O. Garulia.
12. Titaghur Jute Mill, No. 1, P. O. Titaghur.
13. Titaghur Jute Mill, No. 2, P. O. Titaghur.
14. Gourepore Jute Mill, No. 1, Naihati, P. O. Gorifa.
15. Gourepore Jute Mill, No. 2, Naihati, P. O. Gorifa.
16. Union Jute Mill, North, 12, Convent Lane, Entally.

17. Kankinarrah Jute Mill, "A", P. O. Kankinarrah.
18. Kankinarrah Jute Mill, "B", P. O. Kankinarrah.
19. Soorah Jute Mill, 102, Narkeldanga Main Road.
20. Union Jute Mill, South, Buddertallah, P. O. Bartala.
21. Standard Jute Mill, P. O. Titaghur.
22. Khardah Jute Mill, No. 1, P. O. Titaghur.
23. Khardah Jute Mill, No. 2, P. O. Titaghur.
24. Anglo-India Lower Jute Mill, P. O. Jagatdal.
25. Anglo-India Middle Jute Mill, P. O. Jagatdal.
- \*26. Anglo-India Upper Jute Mill, P. O. Kankinarrah.
27. Anglo-India Jagatdal Jute Mill, P. O. Jagatdal.
28. North Alliance Jute Mill, P. O. Jagatdal.
29. South Alliance Jute Mill, P. O. Jagatdal.
30. Lansdowne Jute Mill, Dakhindari, P. O. Belgachia.
31. Kinnison Jute Mill, No. 1, P. O. Titaghur.
32. Kinnison Jute Mill, No. 2, P. O. Titaghur.
33. Alexandra Jute Mill, P. O. Jagatdal.
34. Naihati Jute Mill, P. O. Naihati.
35. Reliance Jute Mill, P. O. Bhatpara.
36. Auckland Jute Mill, P. O. Jagatdal.
37. Kelvin Jute Mill, Titaghur, P. O. Talpukur.
38. Albion Jute Mills, Jaichandipore, Budge Budge.
39. Empire Jute Mill, Titaghur, P. O. Talpukur.
40. Caledonian Jute Mill, Badekalinagar, Budge Budge.
41. Lothian Jute Mill, Jaichandipore, Budge Budge.
42. Cheviot Jute Mill, Badekalinagar, Budge Budge.
43. Waverly Jute Mill, Athpur, P. O. Shamnagar.
44. Orient Jute Mill, Kalipore-Achipur, P. O. Budge Budge.
45. Hukumchand Jute Mills, Kona-Halisahar, P. O. Hazinagar.
46. Birla Jute Mill, Shamganj, P. O. Birlapur, Budge Budge.
47. Nuddea Jute Mill (South), Kantalpara, P. O. Naihati.
48. Nuddea Jute Mill (North), Kantalpara, P. O. Naihati.
49. Calcutta Jute Manufacturing Co., Ltd., 93, Narkeldanga Main Road.
50. Craig Jute Mill, Athpur, P. O. Jagatdal.
51. Megna Jute Mill (South), P. O. Jagatdal.
52. Megna Jute Mill (North), P. O. Jagatdal.
53. Agarpara Jute Mill, Kamarhatty.
54. Shree Gouri Shanker Jute Mills, Shamnagar, P. O. Garulia.
55. Nafar Chandra Jute Mill, Kantadanga Road, P. O. Kankinarrah.
56. The Barnagore Jute Factory Co., Ltd., Bagging Mill, Colvin Ghat Road, P. O. Alambazar.
57. Luxmi Jute Mill, 134, Balliaghata Road, P. O. Balliaghata.

*Howrah.*

58. Fort Gloster Jute Mill (Old), Fort Gloster.
59. Fort Gloster Jute Mill (New), Fort Gloster.
60. Fort Gloster Jute Mill (North), Fort Gloster.
61. Howrah Jute Mills, No. 1, Ramkrishtopur, P. O. Shibpur.
62. Howrah Jute Mills, No. 2, Ramkrishtopur, P. O. Sibpur.
63. Howrah Jute Mills, No. 3, Ramkrishtopur, P. O. Shibpur.
64. Fort William Jute Mills, No. 1, Sibpur.
65. Fort William Jute Mills, No. 2, Sibpur.
66. Delta Jute Mill, Manikpore, P. O. Delta Jute Mills.
67. Belvedere Jute Mills, Sankrail.
68. Bally Jute Mill, Bally.
69. Lawrence Jute Mills, P. O. Chakasi.
70. National Jute Mill, Rajganj, P. O. Sankrail.
71. Ludlow Jute Mill, Chengail, P. O. Chakasi.
72. The Ganges Jute Mill, No. 2, 493, Grand Trunk Road, Sibpur.
73. New Central Jute Mill, 36, Joya Bibi Lane, Ghosuri, Bhotobagan.
74. Shree Hanuman Jute Mill, 76, Old Ghosuri Road.
75. Adamjee Mills, Belur.
76. Naskarpara Jute Mill Co., Ghosury.
77. Gagalbhai Jute Mill, Sijberia, P. O. Uluberia.
78. Prem Chand Jute Mill, Ltd., Chengail, P. O. Chakasi.
79. Kedarnath Jute Mills, 53, Dharamtola Street, Salkia, Howrah.
80. Mahadeo Jute Mills Co., Badamtolla, P. O. Bally.
81. Bharat Jute Mills, Ltd., Kadamtola, Howrah.
82. Shree Ganesh Jute Mills, Ltd., 66, Howrah Road, P. O. Salkia.

*Hooghly.*

83. India Jute Mill, No. 1, P. O. Serampore.
84. India Jute Mill, No. 2, P. O. Serampore.
85. India Twist Mill, No. 3, P. O. Serampore.
86. Victoria Jute Mill, No. 1, P. O. Telinipara.
87. Victoria Jute Mill, No. 2, P. O. Telinipara.
88. Hastings Jute Mill, P. O. Rishra.
89. Wellington Jute Mill, P. O. Rishra.
90. Champdany Jute Mill, P. O. Baidyabati.
91. Dalhousie Jute Mill, Champdany, P. O. Baidyabati.
92. Northbrook Jute Mill, Champdany, P. O. Baidyabati.
93. Angus Jute Mill, Bhadreswar, P. O. Angus.

94. Shamnagar North Jute Mill, P. O. Bhadreswar.
95. Presidency Jute Mill, P. O. Rishra.
96. Bansberia Jute Mill, No. 1, P. O. Bansberia.
97. Bansberia Jute Mill, No. 2, P. O. Bansberia.
98. Shree Luchminarain Jute Mill, P. O. Konnagar.

### 3. Cotton and Jute Presses.

#### (a) Cotton presses.

##### *24-Parganas.*

1. Cossipore Cotton Ginning Factory, 1, Sugar Works Lane, Cossipore.
2. Sadani Cotton Ginning and Pressing (Calcutta) Factory, Ltd., 90, Cossipore Road, Cossipore.
3. Balli Brothers, Ltd., Ranee Cotton Ginning and Pressing Factory, P. O. Cossipore.

##### *Howrah.*

4. Bal Kissen Das Mohta's Kapok Ginning Factory, 34, Mohi Nath Para Lane, Bamangachi, Salkia.
5. Lalchand Mahadeo Lall's Kapok Mill, Dharamtalla Lane, Howrah.
6. Sree Krishna Kapok Mill, 149/6, Old Ghusuri Road.
7. Radhakissen Kapok Mill, 95, Dharamtalla Lane, Salkia.
8. Golab Roy's Kapok Press Factory, Mallipanchgharra, Lillooah.
9. Luxmi Kapok Mills, 7, Goho Road, Ghusury.
10. Salkia Cotton Ginning Factory, 22, Old Ghusuri Road, Salkia.

##### *Dacca.*

11. Balli Brothers, Ltd., Cotton Ginning Factory, Bandar, Narainganj.

##### *Chittagong.*

12. Nittyando Cotton Ginning and Pressing Factory (Balli Brothers, Ltd.), Double Mooring.
13. Luxmi Cotton Ginning and Pressing Factory, Sadarghat Road, Chittagong.
14. Ganesh Cotton Ginning Factory, Strand Road, Chittagong.
15. Nawayuvak Ginning Factory, Office Mill Madarbari, Chittagong.

**(b) Jute Presses.***Calcutta.*

16. Golabari Jute Press, 244, Upper Chitpur Road, Baghbazar.
17. Central Hydraulic Jute Press, 243, Upper Chitpur Road, Baghbazar.

*24-Parganas.*

18. Hooghly Hydraulic Jute Press, No. 3, Chitpur Ghat Lane, Cossipore.
19. Calcutta Hydraulic Jute Press, 9, Kali Prasanna Singhee Street, P. O. Cossipore.
20. Ashcroft Jute Press, 7, Dealerjung Road, Chitpur.
21. Victoria Hydraulic Jute Press, 111, Cossipore Road, Cossipore.
22. Bengal Hydraulic Jute Press, 3, Gun Foundry Road, Cossipore.
23. Ralli Brothers, Ltd., Cossipore Agency, 6, Ram Gopal Ghose Road, Cossipore.
24. Shiva Jute Press, 4, Kali Prasanna Singhee Road, P. O. Cossipore.
25. The Camperdowne Press, 5, Rustomji Parsee Road, Cossipore.
26. New Jheel Jute Press, Cossipore.
27. Chitpur Jute Press, Ltd., 15, Kali Prasanna Singhee Road, P. O. Cossipore.
28. Vishnu Jute Press, 2, Turner Road, P. O. Cossipore.
29. Ganges Jute Press, 1, Nawabputty Road, Chitpur, P. O. Cossipore.
30. Lakshmi Jute Press, 32, Jheel Road, P. O. Cossipore.
31. Atlas and Union Jute Press, 3, Kali Prasanna Singhee Road, P. O. Cossipore.
32. Sun Jute Press, 3, Cossipore Road, Cossipore.
33. Suraj Jute Press, 1/4, Gun Foundry Road, Cossipore.
34. Ocean Jute Press, 2, Dealerjung Road, Chitpur.
35. Cossipore Hydraulic Jute Press, 15A, Ratan Babu Road, Cossipore.
36. Landale and Clarke's Jute Press, Durgapur, P. O. Narkeldanga.
37. New India Jute Press, 4, Gun Foundry Road, P. O. Cossipore.
38. Reliance Jute Press, 15, Daspara Road, P. O. Ultadanga.
39. Homer Jute and Cotton Works, 31, Harakumar Tagore Strand, Barnagore.
40. Gouti Jute Press, 5 and 5/1, Gun Foundry Road, P. O. Cossipore.
41. The Lohia Jute Press, 28, Barrackpore Trunk Road.

*Howrah.*

42. The Ghusuri Jute Press, Joya Bibi Lane, P. O. Ghusuri.
43. Nasmyth Jute Press, 121, Old Ghusuri Road, Ghusuri.
44. Salkia Jute Press, 53, Old Ghusuri Road.
45. The Empress of India Jute Press, 54, Ghusuri Road, Ghusuri.
46. The Imperial Jute Press, 55, Ghusuri Road, Salkia.
47. Bandaghat Press, 4/6, Hajari Mull Shah Road, Salkia.
48. Hanuman Jute Press, 28, Old Ghusuri Road, Salkia.
49. Ludlow Jute Press, Chengail, P. O. Chakasi.

*Dacca.*

50. R. Sim & Co.'s Jute Press, Postogolla, P. O. Faridabad.
51. Tolaram Bachraj Jute Baling, Mirerbag, P. O. Teghoria.
52. Ralli Brothers, Ltd., Jute Press, Tanbazar, Narainganj.
53. M. David & Co.'s Jute Press, Charargope, Narainganj.
54. M. David & Co.'s Jute Press, Sitallakhia, Narainganj.
55. R. Sim & Co.'s Jute Press, Mundumalla, Narainganj.
56. Messrs. Tolaram Gajraj, Bandar, Narainganj.
57. Union Jute Co.'s Jute Press, Nabiganj, Narainganj.
58. Landale & Clarke's Jute Press, Madanganj, Kalagachia.
59. M. Sarkies & Sons' Jute Press, Hajiganj, Narainganj.
60. Jarline Skinner & Co.'s Jute Press (Kankinara Agency), Ekrampur, Narainganj.
61. Sonakanda Baling Co.'s Jute Press, Bandar, Narayanganj.
62. Narainganj Co.'s Jute Press, Saidpur, Narainganj.
63. Narainganj Co.'s Jute Press, Godnail, Narainganj.
64. Radhakissen Matilal Jute Press, Gopechur, Narainganj.
65. Ralli Brothers, Ltd., Jute Press, Sonakanda, Narainganj, Madanganj.
66. Srilal Sarogi's Godown Jute Press, Sitallakhia, Narainganj.
67. The Kassipur Co., Ltd., Messrs. George Henderson & Co., Ltd., Kassipore, Narainganj.
68. Haworth's Agency Co., Sonakanda, P. O. Madanganj.
69. Messrs. Landale & Clarke, Ltd. (Kutch Baling Agency), Hazipore, P. O. Narsingde, Dacca.
70. Messrs. Landale & Clarke, Ltd., Nalgolla, Dacca.
71. Raja's Godown Jute Press, Raja's Godown, Sitallakhia.
72. M. David & Co., Proprietors, George Henderson & Co., Ltd., Ekrampur, P. O. Narainganj.

*Mymensingh.*

73. Ralli Brothers, Ltd., Jute Press, Sarishabari.
74. Landale and Clarke's Jute Press, "P" Branch, P. O. Sarishabari.
75. Ralli Brothers, Ltd., Jute Press (new premises), Jogendranagar (on the other side of the Brahmaputra river).
76. Ralli Brothers, Ltd., Jute Press (old premises), Mymensingh.
77. Landale & Clarke, Ltd. (E. Branch), P. O. Elashin.
78. Haworth's Agency Co., P. O. Elashin.
79. Messrs. R. Sim & Co., Ltd., P. O. Elashin.
80. Messrs. The Chittagong Co., Ltd., P. O. Elashin.
81. The Nikhil Jute Baling, Ltd., P. O. Nikhildampara.
82. R. Sim & Co., Ltd., Dhanata, P. O. Sarishabari.

*Faridpur.*

83. Landale & Clarke's Jute Press, P. O. Charmugaria.
84. R. Sim & Co.'s Jute Press, Charmugaria.

*Tippera.*

85. R. Sim & Co., Ltd., Jute Press ("A" Premises), P. O. Chandpur.
86. Diam Khan and other Jute Press, P. O. Chandpur.
87. Moran Baling Co., Ltd., Jute Press, Puranbazar, P. O. Chandpur.
88. Forester & Company's (Chandpur), Ltd., Jute Press, Puranbazar, Present occupier, Messrs. Chandpur Jute Co., Ltd.
89. Jardine, Skinner & Co.'s Jute Press, P. O. Chandpur.
90. George Henderson & Co., Ltd., Jute Press, P. O. Chandpur.
91. Union Jute Company, Ltd., Jute Press, P. O. Chandpur.
92. Landale & Clarke, Ltd., Jute Press, P. O. Akhaura.
93. The Chittagong Co., Ltd., Jute Press, P. O. Akhaura.
94. R. Sim & Co., Ltd., Jute Press, P. O. Akhaura.
95. The Chittagong Co., Ltd., Jute Press, P. O. Chandpur.
96. George Henderson & Co., Ltd., Jute Press, P. O. Akhaura.
97. R. Sim & Co., Ltd., Jute Press ("B" Premises), P. O. Chandpur.
98. Landale & Clarke, Ltd., Jute Press ("A" Premises), Puranbazar, present occupier, Messrs. Tolaram Bachhraj.
99. Landale & Clarke, Ltd., Jute Press ("B" Premises), Puranbazar, Chandpur.
100. R. Sim & Co., Ltd., Jute Press, P. O. Hajigunge.
101. Ralli Brothers, Ltd., Sub-Agency, P. O. Hajigunge.
102. Kalyanchand Cheinrup Jute Press, P. O. Ashuganj.
103. Messrs. Premsukhdas Malirab Jute Press, P. O. Puranbazar, Chandpur.
104. Messrs. Narayanmull Sohanlall & Co.'s Jute Press, Hajigunge.



*Noakhali.*

105. Chittagong Company, Ltd., Jute Press, P. O. Chaumuhani.

*Chittagong.*

106. The Karnaphuli Jute Mills, Ltd., Damakhali, P. O. Maheshkhali.

*Pabna.*

107. George Henderson & Co., Ltd., Jute Press, Serajganj.  
 108. Ralli Brothers, Ltd., Jute Press, Serajganj.  
 109. Landale & Clarke, Ltd., Jute Press, P. O. Nakalia.  
 110. The Chittagong Company, Ltd., Jute Press, Serajganj.  
 111. Serajganj Jute Press, Serajganj.  
 112. Messrs. Landale & Clarke, Ltd., P. O. Serajganj.

*Rangpur.*

113. Kothari Jute Press, P. O. Saidpur.

*Jalpaiguri.*

114. Ralli Brothers, Ltd., Jute Press, P. O. Jalpaiguri.

*Darjeeling.*

115. Ralli Brothers, Ltd., Jute Press, P. O. Siliguri.

**4. Paper Mills.***24-Parganas.*

1. Titaghur Paper Mill, No. 1, P. O. Titaghur.
2. Titaghur Paper Mill, No. 2, P. O. Kankinarah.
3. India Paper Pulp Co.'s Mill, Naihati, P. O. Hazinagar.

*Burdwan.*

4. Bengal Paper Mill, Raghunath Chuck, Raniganj.

## 5. Rubber Factories.

### *24-Parganas.*

1. The India Rubber Goods Manufacturing Co., 47, Muaripukur Road, P. O. Narkeldanga.
2. Behar Rubber Industrial Co., 14/1, Bibi Bagan Lane, Tangra, P. O. Entally.
3. National Rubber Works, Ltd., 6, Tiljala Road, P. O. Park Circus.
4. The United Rubber Works, 51, Tangra Road, P. O. Entally.
5. Kohinoor Rubber Works, 46/6, Canal East Road, P. O. Narkeldanga.
6. Central Rubber Works, Ltd., 20-B, Tangra Road.
7. Bhattacharya Rubber Works, 18, Sura East Road, Belliaghatta.
8. The Premier Rubber Works, 92, Narkeldanga Main Road.
9. Sen Bros. & Co. Rubber Mills, Ltd., 108, Prince Anwar Shah Road, Tollygunge.
10. Asiatic Rubber Works, Ltd., 54/10, Chingreehatta Road, P. O. Entally.
11. Assam-Bengal Rubber Works, 11, New Tangra Road, P. O. Entally.
12. The Olympic Rubber Works, Ltd., 18, Paymental Garden Lane, P. O. Entally.
13. India Rubber Industries, Ltd., 57, Diamond Harbour Road, P. O. Kidderpore.
14. Bharat Rubber Works, Ltd., Barrackpore Trunk Road, Kamarhati.
15. The Bengal Waterproof Works, Ltd., Mahesh Banerjee Road, Panihati, P. O. Panihati.

### *Howrah.*

16. Raja Bahadur Sukdeo Sahai Rubber Mills, Ghosepara Lane, Lillooah.
17. Indian Rubber Manufacturers, Ltd., 37, Grand Trunk Road, Howrah (North).

### *Hooghly.*

18. The Dunlop Rubber Co. (India), Ltd., P. O. Sahaganj.

**6. Glass Factories.***24-Parganas.*

1. Calcutta Glass and Silicate Works, Ltd., 5, Kundu Lane, Belgachia.
2. The New Indian Glass Works, 101, Ultadingi Main Road, P. O. Shambazar.
3. Sodepur Glass Works, P. O. Sodepur.
4. Bharat Glass Work, Ambica Mukerjee Road, Belgariah.
5. The Oriental Glass Works, 58, Bahir Sura Road, Belliaghatta.
6. Lucky Glass Works, 237L, Maniktola Main Road, P. O. Maniktola.
7. The International Glass Works, 101/2, Ultadanga Main Road, P. O. Ultadanga.
8. Scientific Indian Glass Co., Ltd., 98, Cristopur Road, P. O. Entally.
9. Shree Gavarghan Glass Works, Dum Dum Cantonment, P. O. Dum Dum.

*Hcwrak.*

10. Sree Govindeo Glass Works, Ramrajatolla, P. O. Bator.
11. Victoria Glass Works, P. O. Ghusury.

*Dacca.*

12. Hardeo Glass Works, Tikatoli, P. O. Wari.
13. The Dhakeswari Glass Factory, Ltd., Postogolla, P. O. Faridabad.
14. The Bose's Glass Works, Vill. Lakhankhola, on Easter Bank of Sitalakha River, P. O. Dhakeswari Mill.

**7. Cement, Lime and Pottery Factories.***24-Parganas.*

1. Calcutta Pottery Works, 45, Tangra Road, Entally.
2. The Indian Hume Pipe Co., Ltd., Natore Part, P. O. Tiljala.
3. Art Floors, Ltd., 118, Bondel Road, P. O. Ballygunge.
4. F. Bertelli & Co.'s Marble & Tile Factory, 4, Garden Reach Road, Kidderpore.
5. Asbestos Cement, Ltd., Taratolla Road, P. O. Garden Reach.
6. Art Potteries, Mahesh Mukerjee Feeder Road, P. O. Belghurria.
7. United Potteries, Mohesh Mukerjee Feeder Road, Belghurria.

*Howrah.*

8. Sylhet Lime Works, Panchpara, P. O. Sankrail.
9. Sreekrishna Cement Co., 3/4, Golabari Road, P. O. Salkia.

*Burdwan.*

10. Burn & Co.'s Pottery Works, P. O. Raniganj.
11. Ondal Lime Works, Ondal.
12. Burn & Co.'s Lalkoti Silica Works, Raniganj.
13. Behar Potteries, Ltd., Alladi (Rupnarainpur E. I. Rly.);  
P. O. Samdi.

**8. Ice and Aerated Waters Factories.***Calcutta.*

1. Byron & Co.'s Factory, 50, Central Avenue.
2. Bathgate's Aerated Water Factory, 19, Old Court House Street.
3. Byron & Co.'s Factory, 4B, Chowringhee Road.
4. Byron & Co.'s Factory, 39, Dhurumtolla Street.

*24-Parganas.*

5. The Calcutta Ice Association, Ltd., 3, Gas Street, P. O. Amherst Street.
6. The Light-foot Refrigeration Co., Ltd., 138, Belliaghatta Road, P. O. Entally.
7. Calcutta Cold Storage, Limited, D/1, Hide Road, Kidderpore.
8. The Ganga Ice Factory & Co., 138, Manicktolla Main Road.
9. City Ice Company, 46/6, Canal East Road, P. O. Manicktolla.

*Howrah.*

10. Byron & Co.'s Aerated Water Works, 3, Mukhram Kanuria Road, Howrah.
11. Carlsbad Mineral Water Manufactory, 14, Watkins Lane, Howrah.

*Dacca.*

12. Narainganj Aerated Water Co., Narayanganj.

### 9. Battery and Dry Cell Factories.

#### *Calcutta.*

1. Chloride Electrical Storage Co. (India), Ltd., Entally.
2. Bharat Battery Manufacturing Company, 7/1, Dehi Serampore Lane, Ballygunge.
3. Indian Battery Manufacturing Co., 9A, Ramdhone Mitter Lane.
4. Ever Ready Company (India), Ltd., 3, Canal East Road, Entally.
5. National Battery Manufacturing Corporation, 124/1A, Russa Road.
6. Sakti Batteries, Ltd., Kalighat.
7. A. F. E. Batteries (India),\* Ltd., Bharat Bhawon, Central Avenue.
8. Auto Storage Battery Co., 36, Dharamtala Street.

#### *Howrah.*

9. Utra Battery Co., 17, Bandan Roy Lane, Howrah.

### 10. Pen and Pencil Factories.

#### *Calcutta.*

1. F. N. Gooptu & Co., 12, Beliaghata Road.
2. G. C. Law & Co., 22, Canal South Road.

#### *24-Parganas.*

3. N. Dutt & Sons, Baranagar, 24-Parganas.

### 11. Salt Factories.

#### *24-Parganas.*

1. Lokamanya Salt Works, Ltd., Munsoni, P. O. Frazergonj.
2. Pioneer Salt Manufacturing Co., Sisirgonj.
3. Indian Salt Manufacturers', Ltd., 12, Dalhousie Square, Calcutta.

#### *Midnapore.*

4. Premier Salt Manufacturing Co., Ltd., Samudrapur, Purushattampur, Contai.
5. Bengal Salt Co., Ltd., Dadanpara South Purshattampur, Contai.

#### *Chittagong.*

6. Chittagong Trading Union, Ltd., Fulchhari, Cox's Bazar.

**12. Aluminium and Enamel Works.***24-Parganas.*

1. The Aluminium Manufacturing Co.'s Works, 2, Jessore Road, Dum Dum.
2. The Metal Box Co. of India, Ltd., B2, Hide Road, P. O. Kidderpore.
3. The Bharat Metal and Industrial Works, 2, Neogipara Lane, P. O. Barnagore.
4. The Oriental Metal Industries Lantern Factory, Agarpara Estates, P. O. Kamarhatti.
5. Bengal Enamel Works, Palta, P. O. Ichapur, Nawabganj.
6. Sur Enamel & Stamping Works, 9, Middle Road, Entally.

*Howrah.*

7. The Crown Aluminium Works, Grand Trunk Road, Belur.
8. The Pratap Aluminium Works, 139, Benares Road, Bandaghat, P. O. Howrah.
9. The Bengal Metal Works, Ltd., 182, Naskarpara Road, Ghusury, Howrah.
10. Shree Hanuman Metal Industries, 7 and 8, Goho Road, P. O. Malipanchghara, Malipanchghara.

**13. Leather and Shoe Factories.***24-Parganas.*

1. Mohammad Amin Bros., Hide Godown Factory, 37, Tangra Road.
2. Bata Shoe Co., Ltd., P. O. Batanagar,
3. Cottage Tanning Institute, South Tangra Road, P. O. Dhapa.
4. Calcutta Tanneries, Ltd., P. O. Kankinarah.
5. The Vatal Tannery, Baramahal, Tollygunge.

**14. Paints and Varnish Works.***24-Parganas.*

1. Murarka Paint and Varnish Works, P. O. Sodepur.
2. Jenson & Nicholson's Paint Factory, P. O. Garifa, Naihati.
3. Hoyle Robson Barnett & Co. (India), Ltd., 26, Middle Road, P. O. Entally.
4. Napier Paint Works, 8, Gobra Graathan Road, P. O. Entally.
5. Macfarlane & Co., Ltd., 18, Tangra Road, P. O. Entally.

*Howrah.*

6. Shalimar Paint, Colour and Varnish Works, Goabaria, P. O. Goabaria.
7. Hadfields, Ltd., Paint and Varnish Works, Rani Surnamoyee Lane, Sibpur, Howrah.
8. Standard Paint Works, P. O. Lillooah.

**15. Chemical and Pharmaceutical Works.***24-Parganas.*

1. Bengal Chemical and Pharmaceutical Works, Ltd., 164, Manicktolla Main Road, P. O. Narikeldanga.
2. Smith Stanistreet & Co., Ltd., 18, Convent Road, Entally.
3. Calcutta Chemical Co., Ltd., 35 and 35/1, Panditya Road, P. O. Ballygunge.
4. Bengal Chemical and Pharmaceutical Works, Ltd., P. O. Panihati.
5. The Bengal Immunity Co., Ltd., Jogendra Bysak Road, P. O. Barnagore.
6. Dr. Bose's Laboratory, Ltd., 53, Raja Dinendra Street.
7. India Chemical and Pharmaceutical Industries, 188, Manicktolla Main Road, P. O. Narkeldanga.
8. Tiger Chemical Works, 44/4, Canal East Road, P. O. Narkeldanga.
9. Hutchie Products Co., 19, Dum Dum Road, P. O. Ghughudanga.
10. Dabur (Dr. S. K. Burman), Ltd., 142, Rash Behari Avenue, P. O. Kalighat.
11. Sarkar Gupta & Co., Ltd., 18, Dum Dum Road, P. O. Ghughudanga.
12. The Lister Antiseptic and Dressings Co., Ltd. (1928), Biological Laboratory, 12, Umakanta Sen Lane, P. O. Cossipore. Laboratory, 12, Umakanta Sen Lane, P. O. Cossipore.
13. The Indian Red Lead Factory, 83, Russa Road South, P. O. Tollygunge.

*Howrah.*

14. Kumar Chemical and Pharmaceutical Works, Ltd., Lillooah Station Road, P. O. Lillooah.

*Hooghly.*

15. D. Waldie & Co.'s Chemical Works, P. O. Konnagar.
16. The Bangalore Whitelead Syndicate, Ltd. (Messrs. D. Waldie & Co., Ltd.), P. O. Konnagar.
17. Waldie's Zinc Pigments, Ltd., Konnagar.

*Burdwan.*

18. The Factory, Purandip, Raniganj.

*Midnapore.*

19. Shree Luxmi Tannin Extract Factory, Malancha Road, Kharagpur.

**16. Soap Works.***Calcutta.*

1. Banga Luxmi Soap Works, 9/2/1A, Peary Mohan Sur Lane, P. O. Beadon Street.

*24-Parganas.*

2. Lever Brothers (India), Ltd., 63, Garden Reach Road.
3. Himani Works, 59, Belgachia Road, P. O. Belgachia.
4. Calcutta Soap Works, Calso Park, P. O. Tiljala.
5. National Soap Factory, Canal South Road, Pagladanga, P. O. Entally.
6. Salim Soap Factory, 300, Bagmari Road, P. O. Narkeldanga.
7. National Soap and Chemical Works, Ltd., 41, Prince Anwar Shah Road, Tollygunge.
8. Model Soap Company, 76, Christopher Road, P. O. Entally.
9. The Major Soap Co., 34, Shib Krishto Daw Lane, P. O. Narkeldanga.
10. Sisir Soap Works, 12/1, Jessore Road, Dum Dum.

*Howrah.*

11. New India Soap Works & Golden Soap Factory, 15, Grand Trunk Road, P. O. Lillooah.
12. Empire Soap Works, 33, Mahinath Para Lane.



**17. Kerosene and Petrol Installations.***Calcutta.*

1. Ganga Tinning Factory, 5, Raja Rajkissen Street.

*24-Parganas.*

2. Burma-Shell Oil Storage & Distributing Co. of India, Ltd., "Kerosene Installation," Budge Budge.
3. Standard Vacuum Oil Co.'s Works, Budge Budge.
4. Indo-Burma Petroleum Co.'s Works, Budge Budge.
5. Burmah Shell Oil Storage & Distributing Co. of India, Ltd., "Petrol Installation," Budge Budge.
6. Standard Vacuum Oil Co.'s Chetla Petrol Installation, 122/2, Station Road, Chetla, P. O. Tollygunge.
7. Standard Vacuum Oil Co.'s Chitraganj Petrol Installation, Chitragunge, Budge Budge.
8. Burmah Shell Oil Storage & Distributing Co. of India, Ltd., Kalighat Petrol Depot, 5, Chetla Road, P. O. Tollygunge.
9. Burmah Shell Oil Storage & Distributing Co. of India, Ltd., Narkeldanga Installation, 50, 51/1, Canal East Road, P. O. Belliaghatta.
10. Caltex Kerosene Terminal, Paharpur, P. O. Kidderpore.

*Chittagong.*

11. B. O. C. Oil Installation, Maheshkhali, P. O. Goswaindanga.
12. The Indo-Burma Petroleum Installation, Guptakhali, P. O. Patenga.

**18. Fan and Electric Works.***Calcutta.*

1. F. & C. Osler, Ltd., 12, Old Court House Street.
2. Bosch Service, 41A, Free School Street.
3. B. M. Singh & Sons' Electrical Repair Workshop, 1, Crooked Lane.
4. G. E. C. (India), Ltd., Workshop, Central Avenue (South), P. O. Dharumtollah.

*24-Parganas.*

5. British India Electric Construction Co.'s Works, 6, Mayurbhanj Road, Kidderpore.
6. India Electric Works, 25, South Road, P. O. Entally.
7. Siemens (India), Ltd., Electrical Workshop, 51/2, Hazra Road, P. O. Ballygunge.
8. The Bengal Electric Lamp Works, Ltd., 134, Mollapara Road, Jadabpur, P. O. Jadabpur College.
9. The Calcutta Fan Works, Ltd., 7, Hindusthan Park, P. O. Ballygunge.
10. The Calcutta Electrical Manufacturing Co., Ltd., 6, Ghore Bibi Lane, Narkeldanga.
11. Electric Lamp Manufactures (India), Ltd., 7, Justice Chandra Madhab Road, P. O. Elgin Road.

*Howrah.*

12. Hadfields (India), Ltd., Electric Welding Factory, 14, Ranee Swarnamoyee Road, P. O. Botanic Garden.

**19. Match Factories.***24-Parganas.*

1. Calcutta Match Works, 1B, Dilwarjab Lane, Garden Reach.
2. The Esavi India Match Manufacturing Co., 47, Muraripooker Road, P. O. Narkeldanga.
3. Pioneer Match Factory, 16, Dum Dum Road, Dum Dum.
4. Haydari Match Co., 150A, Beliaghatta Main Road, P. O. Beliaghatta.
5. The Western India Match Co., Ltd., Alambazar, P. O. Dakhineswar.
6. Bangiya Karyalay, 76, Jessore Road, Dum Dum.
7. The Calcutta Match Industries Works, 11/1, Canal East Road, P. O. Shambazar.
8. Bengal Ignition Company, 1, Gurudas Dutta Garden Lane, Ultadanga, P. O. Shambazar.
9. India Match Manufacturing Co., 2, Gurudas Dutt Garden Lane, P. O. Shambazar.
10. Islamia Match Co., 23, Birpara Lane, P. O. Belgachia.
11. Ultadanga Match Factory, 107, Ultadanga Main Road, P. O. Shambazar.

*Birbhum.*

12. Birbhum Match Works, village Tilpara, P. O. Sainthia.

*Dacca.*

13. Prasanna Match Factory, 18, Dewan Bazar Road, Dacca.

*Chittagong.*

14. The Chattal Match Factory, Chittagong.

*Jalpaiguri.*

15. Jalpaiguri Industries, Ltd. (Match Factory), P. O. Jalpaiguri.

**20. General Engineering Workshops.***Calcutta.*

1. W. & T. Avery, Ltd., Workshop, 11, Crooked Lane.
2. Bengal Telephone Corporation, Ltd., Workshop, 1/2, Chittaranjan Avenue.
3. Girish Chandra Basak's Nandanbagan Iron Works, 236, Upper Circular Road.
4. Remington Rand Inc., 285, Bowbazar Street.
5. Mallik Engineering Co., 39, Jorapukur Square Lane.
6. Underwood Typewriter Workshop and Factory, 2, Mangoe Lane.
7. B. H. Smith & Co., 46, Dhurumtolla Street, P. O. Dhurumtolla.
8. Sen & Co., 7, Srinath Babu Lane, P. O. Bowbazar.
9. Dhar & Mondal Brothers, 77, Dharamtolla Street, P. O. Dharamtolla.
10. Paul's Engineering Works, 77/1/1, Clive Street, P. O. Khangraputty.
11. Fakir Chandra Roy & Brothers, 77/3, Clive Street, P. O. Clive Street.

*24-Parganas.*

12. Saxby and Farmer's Railway Signal Works, 17, Convent Road, Entally.
13. Ford Motor Co., of India, Ltd., 110/1, Russa Road, North, P. O. Elgin Road.
14. East Bengal Engineering Works, 2, Rustomji Parsee Road, Cossipore.
15. Civil and Sanitary Engineering Works, 11, Convent Road, Entally.
16. College of Engineering & Technology, Bengal, Jadavpur, P. O. Dhakuria.

17. Gresham & Craven, Ltd., 22, Gobra Road, South, Entally.
18. Bonded Laboratory & Instrument Workshop of Buttokristo Paul & Co. (Research Laboratory), Ltd., 7, Birpara Lane, Dum Dum Junction, P. O. Ghughudanga.
19. Berapukur Iron Works, 18, Ramanath Pal Road, Kidderpore.
20. Britannia Engineering Co.'s Works, P. O. Titaghur.
21. James Alexander & Co.'s Engineering Works, 15, Watgunge Street, Kidderpore.
22. Steel Products Factory (John King & Co.'s), 96, Garden Reach Road, Kidderpore, Hastings.
23. T. Thomson & Co.'s Gariahat Engineering Works, 22, Dover Lane, Ballygunge.
24. J. B. Norton & Sons' Foundry, 28, Middle Road, P. O. Entally.
25. Robert Hudson's Works, 1, Shastitalla Road, Kidderpore.
26. Dutt Engineering Works, 42/1/2, Muraripukur Road, Manicktolla, P. O. Shambazar.
27. Gobindo Sheet Metal Works, 74, Narkeldanga Main Road.
28. G. T. R. C.'s Engineering Works, 37, Dum Dum Road, P. O. Ghughudanga.
29. Bengal Miscellancy, Ltd., 174, Manicktolla Main Road, P. O. Narkeldanga.
30. Hukumchand Electric Steel Works, 8, Swinhoe Street, Ballygunge.
31. Dr. Bose's Laboratory, Ltd., 11, Radhamadhab Dutt Garden Lane, Belliaghatta.
32. Clive Works, Hide Road, Kidderpore.
33. Mather and Platt's Maidan Works, 5, Gopal Doctor Road, Kidderpore.
34. Mackintosh Burn & Co.'s Works, 8/1, Dehi-Serampore Lane, Ballygunge.
35. Electric Welding and Manufacturing Co., Naihati, P. O. Garifa.
36. Jessop & Co.'s Dum Dum Wagon Works, 11, Jessore Road, Dum Dum Cantonment.
37. Beruck & Comen's Engineering Works, 38, Tiljala Road, P. O. Tiljala.
38. Jessop & Co., Ltd., Dum Dum Structural Works, North Barrack Road, Dum Dum Cantonment.
39. D. N. Bose & Co., Ltd., Workshop, 44/1, Canal East Road, P. O. Manicktolla.
40. Dorman Long & Co.'s Victoria Works, Circular Garden Reach Road, P. O. Kidderpore.
41. J. Stone & Co. (India), Ltd., 5, Hide Road, P. O. Dock Junction.
42. Jessop & Co., Ltd., Dum Dum Mechanical Works, 11, Jessore Road, Dum Dum Cantonment.

43. Technical School and Industrial Orphanage, Kasinath Dutt Road, Baranagore.
44. The India Industrial Mission School, 5, Seal's Garden Lane, Cossipore.
45. C. Comens & Sons, Ltd., Goragacha Road, P. O. Behala.
46. Purushottam Ramji, 83-C, Chetla Road, P. O. Alipore.
47. Peco Engineering & Manufacturing Works, 2A, Khas Mahal Street, P. O. Beadon Street.
48. Calcutta Engineering College Workshop, 13, Jamir Lane, P. O. Ballygunge.
49. Kalipada Mondal's Workshop, 99, Narkeldanga Main Road, P. O. Narkeldanga.
50. Parry's Engineering, Ltd., B1, Hide Road, P. O. Kidderpore.
51. Messrs. Berry Brothers' Engineering Workshop, 260, Barrackpore Trunk Road, P. O. Sukchar.
52. Sur and Co., 45, Christopher Road, Gobra, P. O. Entally.
53. Shib Sankar Engineering Works, P. O. Kamarhati.
54. Clive Metal Works, P. O. Ariadah.
55. J. N. Dass Engineering Works, Nawdapara Road, P. O. Kamarhatty.
56. The Evewest Engineering Co., Ltd., 294/2/1, Upper Circular Road, P. O. Amherst Street.
57. Vulcan Engineering Works, 287, Diamond Harbour Road, P. O. Behala.
58. M. C. Mowjee & Co., 75, Tollygunge Circular Road, P. O. Tollygunge.
59. The Braithwaite, Burn & Jessop Construction Co., Ltd., Victoria, Works, Circular Garden Reach Road, P. O. Kidderpore.
60. Paris Collapsible Gate Company, 2 and 3, Rifle Road, Park Circus.
61. The Indian Malleable Castings, Ltd., 44, Mohesh Mukerjee Road, P. O. Belghoria.
62. Amulya Charan Das's Works, Dakshineswar, P. O. Ariadaha.
63. Remington Rand Inc., 182, Lower Circular Road, P. O. Entally.
64. Acme Iron & Brass Works, 27, Russa Road, South, P. O. Tollygunge.
65. B. N. Chatterjee & Sons, 29, Middle Road, P. O. Entally.
66. Ballygunge Engineering Works, 33/1/1, Kankalia Road, Ballygunge.
67. The Joy Engineering Works, Ltd., Prince Anwar Shah Road, P. O. Dhakuria.
68. Railway Engineering Works, 35, Diamond Harbour Road, P. O. Alipur.
69. Metropolitan Engineering Co., Structural Deptt., 39B, Sasthitola Road, P. O. Kidderpore.

70. P. L. Bery & Co., 91, Jessore Road, P. O. Dum Dum.
71. India Collapsible Gate Co., 23, Picnic Garden Road, P. O. Tiljala.
72. Dolohur, Ltd., Bama Charan Roy Road, P. O. Behala.
73. Maya Engineering Works, 23, Russa Road, South, P. O. Tollygunge.
74. The Jodhpur Engineering Works, Gariahat Road, P. O. Dhakuria.

*Nadia.*

75. Renwick & Co., Ltd., Kushtia.
76. The Kushtia Sugarcane Mills, Ltd., Kushtia.

*Howrah.*

77. The Britannia Building and Iron Workshop, 286, Grand Trunk Road, Salkia, Howrah.
78. A. & J. Main & Co., Ltd.'s Structural Works, 157, Andul Road, P. O. Botanic Garden, Sibpur.
79. Port Engineering Works, Nazirganj.
80. The Dragon Iron Works, 29/2, Kissenlal Burman's Road, Salkia.
81. Hiralal Mondal's Iron Foundry, 7/8, Baistabpara Lane, Howrah.
82. The Star Iron Works, Lillooah.
83. Fakirchand Dass Mistry & Sons' Engineering Works, 143 and 144, Bellilios Road, Bantra.
84. Dhang & Co.'s Foundry Nos. 1, 2, Sreeram Dhang Road, Salkia.
85. D. N. Singha & Co.'s Iron Foundry, 61, Sitanath Bose Lane, Salkia.
86. Thakurdas Surekha's Pan Factory, 8/1, Goho Road.
87. Calcutta Steel and Iron Foundry, 13, Gopal Ghose Lane, Salkia.
88. A. C. Ghose's Workshop, 114, Makardah Road, Bantra.
89. Bishnupada Atta's Iron Foundry, No. 1, 171, Grand Trunk Road, Salkia.
90. Dey and Kundu Company's Iron Foundry, 2, Dolgobinda Singha Lane, Salkia.
91. P. C. Mittra & Co.'s Khurut Iron Works, 1, Kasundia 2nd Bye Lane.
92. Panchkowsy Ghose's Iron Works, Bantra, Kadamtala.
93. Britannia Engineering Works and Foundry, 34/35, Hurroganj Road, Salkia.
94. Kanailal Singha and Nandalal Adhikary's Monshatala Iron Works, North Bantra, Monshatala.

95. Jogendra Nath Chatterjee & Son's Pan Foundry, 18, Chatterji-para Lane, North Bantra.
96. Gostobehari Singh Roy's Moon Iron Works, Old Benares Road, Belgachia.
97. Keshab Ch. Banerjee's Foundry, 130, Bellilios Road, South Bantra.
98. Ramnarayan Banerjee & Son's Iron Works, 43, Madhusudan Paul Choudhuri Lane, North Bantra.
99. The Howrah Engineering Company's Works, 43, Circular Road, Khurut.
100. Bridge & Roof Co.'s Structural Works (New Premises), 422, Grand Trunk Road.
101. Aswinikumar Mandal's Iron Works, No. 1, 205, Bellilios Road, Bantra.
102. Guest, Keen Williams, Ltd., Railway Appliance Works, 97, Andul Road, P. O. Botanic Garden.
103. Guest, Keen Williams (India), Ltd., Bharpara Road, Shalimar.
104. Haradhan Mandal & Co.'s Iron Foundry, 67, Nursing Dutt Road, Bantra, Howrah.
105. The Bengal Iron Works, 16/2, Chatterjeepara Lane, Howrah.
106. Kushumika Iron Works, 71, 72 and 73, Jeliapara Lane.
107. B. N. Pachal's Iron and Brass Foundry, 208, Bellilios Road, Howrah.
108. Crown Iron Works, Benares Road, Belgachia.
109. The Coronation Engineering Works, 55, Chatterjeepara Lane.
110. Sulkea Engineering Works, 66A, Howrah Road, P. O. Sulkea.
111. Mitra, Das, Ghosh & Co.'s Iron Foundry, 172, Bellilios Road, Howrah.
112. Nandy's Engineering Works, 139, Benares Road, Bandaghat, P. O. Salkia.
113. Mondal & Karar's Iron Foundry, 177-1, Bellilios Road.
114. Messrs. Senapati Brothers, 132, Bellilios Road, South Bantra.
115. Bhattacharjee & Co., 176, Bellilios Road.
116. Bantra Engineering Works, 233, Bellilios Road.
117. Steel Equipment & Construction, Ltd., Factory, 113, Benares Road, P. O. Salkia.
118. D. C. De & Sons' Workshop, 151/1, Narsing Dutt Road.
119. S. Dass & Bros.' Engineering Works, 75, Narsing Dutt Road.
120. Pandit Brothers, Echapur Road, Kadamtola.
121. R. M. Chatterjee's Iron Foundry, 63, Sitanath Bose Lane, Salkia.
122. B. K. Karar's Iron Foundry and Workshop, 155-157, Bellilios Road, Howrah.
123. The Calcutta Rolling Mills Co., 106 and 106/1, Dhurramtolla Road, Howrah.
124. Ramkrishna Iron Works, 56, Chasadhopapara Lane, North Bantra.

125. Pal's Engineering Works, 39, Kalachand Nandy's Lane, Howrah.
126. Indian Tube Co., Ltd., 1, Foreshore Road, Sibpore.
127. R. M. Chatterjee's Factory, Old Benares Road, Belgachia.
128. The Victoria Iron Works, P. O. Salkia.
129. Kalipada Mistry & Co.'s Reliance Engineering Works, 233 and 233/1, Bellilios Road.
130. Sarougi Engineering Works, 125, Benares Road, P. O. Salkia.
131. Lloyds Engineering Works, 190, Bellilios Road, P. O. Kadamtolla.
132. Sree Hanuman Foundry Works, P. O. Ghusury.
133. Sen & Co., 3, Kuchil Sircar Lane, Howrah.
134. Kundu Sett & Co., P. O. Santragachi.
135. S. C. Dass & Co., Old Benares Road.
136. Shree Hanuman Iron Galvanising Works, Ltd., Uttar Bantra, Belgachia Road, P. O. Kadamtolla.
137. The Shanker Industries, Stark Road, P. O. Lillooah.
138. Vulcan Engineering Works, Belgachia Road.
139. Metal Manufacturing Co., Ltd., 14, Stark Road, Lillooah.
140. India Weighing Scales & Engineering Co., 233, Bellilios Road.
141. Bhalal Brothers, Ltd., 2/1, Kishan Doyal Road, P. O. Ghusuri.
142. Satish Ch. Day & Sons' Iron Works, 74, Benares Road, Chasadhopapara, North Bantra.
143. Agarwala Hardware Works, Chasadhopapara Lane, P. O. Kadamtolla.
144. India Machinery Co., Ltd., Makurdah Road, Dassnagar.
145. Ananta Chatterjee & Son, 200, Bellilios Road.
146. Auto-Scales & Engineering Co., 233, Bellilios Road.
147. K. P. Mukerjee's Iron Foundry, 7, Chasadhopapara Lane, P. O. Kadamtollah.

*Hooghly.*

148. Angus Engineering Works, Bhadreswar, P. O. Angus.

*Burdwan.*

149. Equitable Coal Company's Neamatpur Engineering Workshop, Sunderchak, P. O. Sitarampur.
150. Chora Engineering Works, P. O. Chora, Raniganj.
151. Indian Standard Wagon Company's Santa Works, Asansol, P. O. Burnpur.
152. The Eastern Light Casting Company's Works, P. O. Kulti.
153. Bengal Coal Company's Sodepur Works, P. O. Sodepur, Sitarampur.
154. New Beerbhum Coal Company's Dhadka Workshop, Dhadka, Asansol.
155. Seebpur Central Works, P. O. Charanpore.



*Midnapore.*

156. Bengal-Nagpur Railway Line Engineering Works, South-side, Kharagpur.  
 157. W. & T. Avery, Ltd., Avery's Workshop, Kharagpur.

*Dacca.*

158. India General and River Steam Navigation Co.'s Sonachora Workshop, P. O. Dhakeswari Mill.  
 159. Harakanta Banerjee's Narainganj Iron Works, P. O. Narayanganj.  
 160. The Madan Mohan Iron Works, Western Road, Narayanganj.

*Mymensingh.*

161. Kashi Kishore Technical School, Mymensingh.

*Faridpur.*

162. Faridpur Mission Industrial School Workshop, Faridpur.

*Bakarganj.*

163. River Steam Navigation and India General Navigation and Railway Company's Works, Barisal.  
 164. R. S. N. & I. G. N. & Ry. Co.'s Floating Workshop "Paksey," Barisal.

*Chittagong.*

165. Assam-Bengal Railway Miscellaneous Engineering Workshop, Battali.  
 166. Messrs. The Chittagong Engineering Works, Ltd., Chittagong.

*Rajshahi.*

167. Renwick & Co.'s Engineering Workshop, P. O. Lakshmanhati.

*Jalpaiguri.*

168. Samsing Workshop, P. O. Matelli.

*Darjeeling.*

169. Ansell & Sons' Darjeeling Engineering Works, P. O. Toong.

## 21. Shipbuilding and Engineering Workshops.

### *24-Parganas.*

1. I. G. N. & Ry. Co.'s Rajabagan Dockyard, 44, Garden Reach.
2. Macneil & Co.'s Garden Reach Workshop, 43/46, Garden Reach.

### *Howrah.*

3. Hooghly Docking and Engineering Co.'s Workshop, 6, Howrah Road, P. O. Salkia.
4. Howrah Iron Works (Burn & Co.), 20, Telkul Ghat Road.
5. Shalimar Works, 63, Foreshore Road, Sibpur.
6. Ganges Engineering Works, P. O. Bally.
7. The Calcutta Landing and Shipping Company's Works, 20, Howrah Road, P. O. Salkia.
8. Karuna Engineering Works, Rajgunge, P. O. Sankrail.
9. The Indian Shipping Co., Ltd., Workshop, 56/62, Old Ghosury Road, P. O. Ghosury.
10. Howrah Trading Co., Ltd., Boat Building Department, 62D/2, Old Ghosuri Road, P. O. Ghosuri.

## 22. Railway Workshops.

### *Burdwan.*

1. Burdwan-Katwa Railway Works, Katwa.

### *Bankura.*

2. Bankura-Damodar River Railway Workshop, P. O. Bankura.

### *Midnapore.*

3. Bengal-Nagpur Railway Workshop (Locomotive Section), Kharagpur.
4. Bengal-Nagpur Railway Locomotive Shed Workshop, Kharagpur.
5. Bengal-Nagpur Railway Workshop (Carriage Section), Kharagpur.
6. Bengal-Nagpur Railway Workshop (Wagon Section), Kharagpur.

### *Howrah.*

7. Bengal-Nagpur Railway Marine Workshop, Shalimar, P. O. Sibpur.
8. Howrah-Amta Railway Bankra Works, P. O. Makarda.
9. Martin & Co.'s Kadamtala Running Shed, P. O. Kadamtala.
10. Santragachi Loco. Shed, Santragachi, P. O. Jagacha.

*Chittagong.*

11. Assam-Bengal Railway Locomotive Carriage and Wagon Shop, P. O. Pahartali.

*Jalpaiguri.*

12. Bengal Dooars Railway Workshop, P. O. Domohani.

*Darjeeling.*

13. Darjeeling-Himalayan Railway Locomotive Carriage and Wagon Workshops, P. O. Tindharia.

**23. Electric Supply Companies.***24-Parganas.*

1. Cossipore Power Station, 28, Jheel Road, Cossipore.
2. Gourepore Power Station, Naihati, P. O. Garifa.
3. Bhatpara Power House, Atpore, P. O. Shamnagar.
4. Calcutta Electric Supply Corporation, Ltd., Southern Power Station, 28, Garden Reach Road.

*Howrah.*

5. Bengal-Nagpur Railway Electric Battery House, Santragachi, P. O. Jagacha.

*Burdwan.*

6. Dishergarh Power Supply Co.'s Central Power Station, Radhanagar, P. O. Sitarampur.
7. Seebpore Power Station Associated Power Co., Ltd., Jamuria, P. O. Charanpur.

*Midnapore.*

8. Bengal-Nagpur Railway Workshop (Electrical Section), Kharagpur.

*Chittagong.*

9. Assam-Bengal Railway Electric Power House, P. O. Pahartali.

*Mymensingh.*

10. Power House of the Mymensingh Bank, Commerce & Industry, Ltd., P. O. Mymensingh.

*Dacca.*

11. The Dacca Electric Supply Co., Ltd., Abdul Gani Road, P. O. Ramna, Dacca.

**24. Silk Mills.***24-Parganas.*

1. Bengal Silk Mill, 13, Ariff Road, Ultadanga, P. O. Shambazar.
2. Coonwer Silk Mill, 30, Mission House Lane, P. O. Tollygunge.
3. The Calcutta Silk Manufacturing Co., Ltd., 23, Barrackpore Trunk Road, P. O. Sukchar.
4. The Calcutta Silk Weaving Co., 1, Moti Mitter Lane.
5. Swadeshi Industries, Ltd., Panihati.

*Howrah.*

6. The Calcutta Silk Mills, P. O. Lillooah.

**25. Sugar Mills.***24-Parganas.*

1. Raj Lakshmi Sugar Mill, Ltd., Maitra Bagan, P. O. Basirhat.

*Nadia.*

2. The Ramnaggar Cane & Sugar Factory, Teznaggar, P. O. Plassey.
3. Darsana Sugar Mills, P. O. Darsana.

*Murshidabad.*

4. Shree Radha Krishna Sugar Mills, Ltd., P. O. Beldanga.

*Dacca.*

5. The Deshbandhu Sugar Mills, Ltd., P. O. Charsindur.
6. The East Bengal Sugar Mill, Ltd., Shome (Kaliganj), P. O. Kaliganj, Kaliganj.

*Mymensingh.*

7. Dayamayee Jayanti Sugar Mills, Ltd., P. O. Kishoreganj, A. B. Ry.

*Malda.*

8. The Malda Co-operative Panchanandpur Sugar Mills, P. O. Panchanandpur.

*Rajshahi.*

9. Luxmi Sugar Mill, Pabna, P. O. Shopura.
10. North Bengal Sugar Mills, P. O. Gopalpur.

*Dinajpur.*

11. The Setabganj Sugar Mills, P. O. Setabganj.
12. Shaktara Pratisthan, Ltd., Sugar Mills, Kazipara Mouza, P. O. Biral.
13. Sen-Gupta Sugar Mill, P. O. Biral.

*Jalpaiguri.*

14. Shikarpur Sugar Mills, P. O. Belacoba.

**26. Hosiery Factories.***Calcutta.*

1. Jhamapukur Hosiery Factory, 3 and 5, Brojonath Mitter's Lane, P. O. Amherst Street.
2. The Modern Knitting, 12, Grants, Lane, P. O. Bowbazar.
3. Prabartak Hosiery Works, 63, Bowbazar Street.
4. Pabna Cotton Mills, Ltd., 3, Beprodas Dey Lane, P. O. Hakkhola.

*24-Parganas.*

5. The Kidderpore Hosiery Mills, 2, Ashoo Babu Lane, Kidderpore.
6. Kothari Hosiery Mills, 24, Chaulpatty Road, Belliaghata.
7. Bharat Lakshmi Hosiery Mill, 4, Beltola Road, P. O. Kalighat.
8. Kapoor Hosiery Factory, Ltd., 8, South Sinthee Road, P. O. Cossipore.
9. Calcutta Hosiery Mills, 13/1, Bondel Road.
10. Banga Lakshmi Hosiery Mills, 58/1A, Barrackpore Trunk Road, P. O. Cossipore.
11. Kalighat Hosiery Factory, 231, Rash Behari Avenue, P. O. Ballygunge.
12. Deshbandhu Hosiery Factory, 100A, Garpar Road.
13. Kusum Hosiery Mills, 81, Talpukur Road, P. O. Beliaghata.
14. Model Industries, Ltd., 6/1, Munshiganj Road, P. O. Manshattalla (Kidderpore).
15. M. S. Hosiery Factory, 1, Ramlal Agarwalla Lane, P. O. Baranagore.
16. Kalighat Gouri Hosiery, 121/B/C, Hazra Road, P. O. Kalighat.
17. Prosad Hosiery Factory, Ltd., 18, Watgunj Street, P. O. Kidderpore.

*Burdwan.*

18. Mohan Hosiery Mill, Sir Bepin Behari Ghosh Road, Burdwan.

*Howrah.*

19. Kesoram Cotton Mills, Ltd. (Hosiery No. 2), 13, Watkin's Lane, Howrah.  
 20. Juggilal Kamapat Hosiery Factory, 29, Grand Trunk Road, P. O. Belur Math.  
 21. Basanti Hosiery Mills, 39, Grand Trunk Road, Lillooah.  
 22. The Mahaber Hosiery Mills, 142, Benares Road, Salkia.  
 23. Rajlakshmi Hosiery Mills, Ltd., 108/1, Benares Road, Salkia.  
 24. Himatsingha Hosiery Factory, 97-99, Haroganj Road, Salkia.  
 25. Hari Hosiery Factory, 8/1, Harduttrai Chamaria Road, P. O. Dobson Road (Sub-office).  
 26. Sreeram Hosiery Mill, 362, Grand Trunk Road, P. O. Salkia.  
 27. Simla Hosiery Factory, 16, Belur Road, P. O. Lillooah.  
 28. Shree Krishna Hosiery Manufacturing Co., Ltd., 6, Tarachand Ganguly Street, P. O. Belur.  
 29. Paradesi Hosiery, 12, Madhab Ghose Road, Howrah.  
 30. Saraswati Knitting Works, 20, Dobson Road.  
 31. The Parjoor Hosiery Mills, Ltd., Kumarpara, P. O. Lillooah.

*Dacca.*

32. The Dacca Hosiery Mills, Ltd., 1, Shakharinagar Lane, P. O. Faridabad, Dacca.  
 33. Dayamayee Hosiery Factory, 2, Thakurdas Lane, Dacca.

*Pabna.*

34. Pabna Silpa Sanjibani Company's Works, Pabna.  
 35. The Banamali Hosiery Mills, Ltd., Pabna.  
 36. Harinath Hosiery Factory, Pabna.  
 37. The Pabna Lakshmi Hosiery, Ltd., Pabna.  
 38. Desh Bandhu Hosiery Factory, Himaitpur (Pabna), P. O. Hamaitpur.  
 39. Pabna Anukul Hosiery Factory, Himaitpur, P. O. Satsang.  
 40. The Sree Ram Krishna Hosiery Mill, Pabna.  
 41. The Pabna Cotton Mills, Ltd., Pabna.

**27. Tea Estates.***Chittagong.*

1. Baramasia Tea Estate Factory, P. O. Baramasia.
2. Kodala Tea Estate Factory, P. O. Rangunia.
3. Oodaleah Tea Estate Factory, Oodaleah, P. O. Katirhat.
4. Kornafuli Association, Ltd., Tea Factory, P. O. Fenoa.
5. Thandacherii Tea Estate Factory, P. O. Thandacheri.
6. Dantmara Tea Estate Factory, P. O. Narayan's Hat.
7. Kaiyacherra Tea Estate Factory, P. O. Bhojpur.
8. Ramgarh Tea Estate Factory, P. O. Nalua.
9. Halda Valley Tea Estate Factory, P. O. Narayan's Hat.
10. Andharmanik Tea Estate Factory, P. O. Nalua.
11. Chandpur Tea Estate, P. O. Banigram.
12. Patiya Tea Estate Factory, Kharauna, P. O. Shonacherri.
13. Chandranagar Tea Estate Factory, P. O. Narayan's Hat.

*Jalpaiguri.*

14. Kumargram Tea Estate Factory, P. O. Newlands.
15. Birpara Tea Estate Factory, P. O. Birpara.
16. Good Hope Tea Estate Factory, P. O. Dam Dim.
17. Dam Dim Tea Estate Factory, P. O. Dam Dim.
18. Ranicherra Tea Estate Factory, P. O. Saili Hat.
19. Baradighi Tea Estate Factory, P. O. Baradighi.
20. Gondrapara Tea Estate Factory, P. O. Banarhat.
21. Kumlai Tea Estate Factory, P. O. Dam Dim.
22. Rangamati Tea Estate Factory, P. O. Mal.
23. Nakhati Tea Estate Factory, P. O. Mal.
24. Nagaisuree Tea Estate Factory, P. O. Matelli.
25. Chalouni Tea Estate Factory, P. O. Matelli.
26. Jiti Tea Estate Factory, P. O. Nagrakata.
27. Gangoitia Tea Estate Factory, P. O. Kalchini.
28. Lakhipara Tea Estate Factory, P. O. Banarhat.
29. Dima Tea Estate Factory, P. O. Kalchini.
30. Nowera Nuddy Tea Estate Factory, P. O. Neona.
31. Rydak Tea Estate Factory, P. O. Raidak.
32. Kartick Tea Estate Factory, P. O. Hathipotha.
33. Ellenbarrie Tea Estate Factory, P. O. Pillan's Hat.
34. New Lands Tea Estate Factory, P. O. Nawlands.
35. Matelli Tea Estate Factory, P. O. Matelli.
36. Moortee Tea Estate Factory, P. O. Matelli.
37. Totapara Tea Estate Factory, P. O. Banarhat.

38. Dem Dima Tea Estate Factory, P. O. Birpara.
39. Majherdabri Tea Estate Factory, P. O. Alipur Duar.
40. Soongachi Tea Estate Factory, P. O. Mal.
41. Toonbarrie Tea Estate Factory, P. O. Mal.
42. Dheklapara Tea Estate Factory, P. O. Binnaguri.
43. Gurjaman Tea Estate Factory, P. O. Banarhat.
44. Malangi Tea Estate Factory, P. O. Hasimara.
45. Beech Tea Estate Factory, P. O. Hasimara.
46. Bharnabari Tea Estate Factory, P. O. Hasimara.
47. Haldibari Tea Estate Factory, P. O. Binnaguri.
48. Central Duars Tea Estate Factory, P. O. Panabasti.
49. Telepara Tea Estate Factory, P. O. Binnaguri.
50. Bandapani Tea Estate Factory, P. O. Banarhat.
51. Banarhat Tea Estate Factory, P. O. Banarhat.
52. Choonabhutti Tea Estate Factory, P. O. Banarhat.
53. New Duars Tea Estate Factory, P. O. Banarhat.
54. Jaybirpara Tea Estate Factory, P. O. Binnaguri.
55. Engo Tea Estate Factory, P. O. Matelli.
56. Rajabhat Tea Estate Factory, P. O. Garopara.
57. Tasati Tea Estate Factory, P. O. Birpara.
58. Mujnai Tea Estate Factory, P. O. Hantupara.
59. Dumchipara Tea Estate Factory, P. O. Hantupara.
60. Carron Tea Estate Factory, P. O. Carron.
61. Katalguri Tea Estate Factory, P. O. Banarhat.
62. Ambari Tea Estate Factory, P. O. Carron.
63. Gairkhata Tea Estate Factory, P. O. Gairkata.
64. Garganda Tea Estate Factory, P. O. Hantupara.
65. Manabarrie Tea Estate Factory, P. O. Manabarrie.
66. Karballa Tea Estate Factory, P. O. Banarhat.
67. Binaguri Tea Estate Factory, P. O. Binnaguri.
68. Debpara Tea Estate Factory, P. O. Banarhat.
69. Chamurchi Tea Estate Factory, P. O. Banarhat.
70. Hope Tea Estate Factory, P. O. Nagrakata.
71. Killcott Tea Estate Factory, P. O. Matelli.
72. Lankapara Tea Estate Factory, P. O. Hantupara.
73. Hahaipatha Tea Estate Factory, P. O. Mal.
74. Kurti Tea Estate Factory, P. O. Nagrakata.
75. Hilla Tea Estate Factory, P. O. Nagrakata.
76. Bhogotpore Tea Estate Factory, P. O. Nagrakata.
77. Nagrakata Tea Estate Factory, P. O. Nagrakata.
78. Ghatia Tea Estate Factory, P. O. Nagrakata.
79. Tondoo Tea Estate Factory, P. O. Bamoni.



80. Bamandanga Tea Estate Factory, P. O. Bamoni.
81. Mogulkata Tea Estate Factory, P. O. Banarhat.
82. Makrapara Tea Estate Factory, P. O. Makrapara.
83. Shikarpur Tea Estate Factory, P. O. Belacoba.
84. Gopalpur Tea Estate Factory, P. O. Gopalbagan.
85. Danguajhar Tea Company's Rangamalli Tea Estate Factory,  
P. O. Danguajhar.
86. Sarugaon Tea Estate Factory, P. O. Birpara.
87. Indong Tea Estate Factory, P. O. Matelli.
88. Bhatkhawa Tea Estate Factory, P. O. Gorapara.
89. Phaakowa Tea Estate Factory, P. O. Hathipotha.
90. Aibheel Tea Estate Factory, P. O. Matelli.
91. Chuniajhora Tea Estate Factory, P. O. Hathipotha.
92. Diana Tea Estate Factory, P. O. Carron.
93. Gurjangjhora Tea Estate Factory, P. O. Mal.
94. Hosainabad Tea Estate Factory, P. O. Birpara.
95. Jaldacca Altadanga Tea Estate Factory, P. O. Nathoahat.
96. Malnady Tea Estate Factory, P. O. Mal.
97. Rahimabad Tea Estate Factory, P. O. Hathipotha.
98. Rheabari Tea Estate Factory, P. O. Banarhat.
99. New Glencoe Tea Estate Factory, Sankhini, P. O. Mal.
100. Mechpara Tea Estate Factory, P. O. Kalchini.
101. Leesh River Tea Estate Factory, P. O. Pillans Hat.
102. Washabbarrie Tea Estate Factory, P. O. Pillans Hat.
103. Jainti Tea Estate Factory, P. O. Hathipotha.
104. Putharjhora Tea Estate Factory, P. O. Manabari.
105. Meenglas Tea Estate Factory, P. O. Saili Hat.
106. Dalingkote Tea Estate Factory, P. O. Mal.
107. Chuapara Tea Estate Factory, P. O. Chuapara.
108. Hantapara Tea Estate Factory, No. 1, P. O. Hantupara.
109. Hantapara Tea Estate Factory, No. 2, P. O. Hantupara.
110. Ethelbari Tea Estate Factory, P. O. Birpara.
111. Nangdala Tea Estate Factory, P. O. Birpara.
112. Raimatang Tea Estate Factory, P. O. Kalchini.
113. Kalchini Tea Estate Factory, P. O. Kalchini.
114. Looksan Tea Estate Factory, P. O. Carron.
115. Sylee Tea Estate Factory, P. O. Saili Hat.
116. Toorsa Tea Estate Factory, P. O. Dalsingpara.
117. Oodlabari Tea Estate Factory, P. O. Dam Dim.
118. Radharani Tea Estate Factory, P. O. Chuapara.
119. Sam Sing Tea Estate Factory, P. O. Matelli.
120. Zurrantee Tea Estate Factory, P. O. Matelli.
121. Cong Tong Tea Estate Factory, P. O. Matelli.
122. Dalsingpara Tea Estate Factory, P. O. Dalsingpara.

123. Sathkyah Tea Estate Factory, P. O. Mal.
124. Dalgaon Tea Estate Factory, P. O. Birpara.
125. Dalmore Tea Estate Factory, P. O. Birpara.
126. Red Bank Tea Estate Factory, P. O. Carron.
127. Chengmari Tea Estate Factory, P. O. Carron.
128. Moraghat Tea Estate Factory, P. O. Binnaguri.
129. Nya Sylee Tea Estate Factory, P. O. Nagrakata.
130. Bagracote Tea Estate Factory, P. O. Pillans Hat.
131. Atiabari Tea Estate Factory, P. O. Kalchini.
132. Baintgoorie Tea Estate Factory, P. O. Baradighi.
133. Mathura Tea Estate Factory, P. O. Alipur Duar.
134. Kohinoor Tea Estate Factory, P. O. Saontalpur.
135. Gazalduba Tea Estate Factory, P. O. Manabari.
136. Kalabari-Rangati Tea Estate Factory, P. O. Banarhat.
137. Ramjhora Tea Estate Factory, P. O. Hantupara.
138. Chulsa Tea Estate Factory, P. O. Matelli.
139. Bhandiguri Tea Estate Factory, P. O. Belacoba.
140. Patkapara Tea Estate Factory, P. O. Alipur Duar.
141. Turturi Tea Estate Factory, P. O. Hathipotha.
142. Sankos Tea Estate Factory, P. O. Newlands.
143. Nimtijhora Tea Estate Factory, P. O. Kalchini.
144. Batabari Tea Estate Factory, P. O. Chalsa.
145. Dhowlajhora Tea Estate Factory, P. O. Saontalpur.
146. Karala Valley Tea Estate Factory, P. O. Jalpaiguri.
147. Joypur Tea Estate Factory, P. O. Belacoba.
148. Saraswatipur Tea Estate Factory, P. O. Belacoba.
149. Raipur Tea Estate Factory, P. O. Rangdhamali.
150. Anandapur Tea Estate Factory, P. O. Rajadanga.
151. Nedam Tea Estate Factory, P. O. Mal.
152. Satali Tea Estate Factory, P. O. Hasimara.
153. Jadabpur Tea Estate Factory, P. O. Ramsaihat.
154. Malhati Tea Estate Factory, P. O. Chengmari.
155. Chinchula Tea Estate Factory, P. O. Kalchini.
156. Kadambini Tea Estate Factory, P. O. Falakata.
157. Achapara Tea Estate Factory, P. O. Chuapara.
158. Nipuchapur Tea Estate Factory, P. O. Baradighi.
159. Madhu Tea Estate Factory, P. O. Hasimara.
160. Saudamini Tea Estate Factory, P. O. Hasimara.
161. The Srinathpur Tea Estate Factory, P. O. Saontalpur.
162. Bholanath Tea Estate Factory, P. O. Ramshaihat.
163. Rahimpur Tea Estate Factory, P. O. Binnaguri.
164. Luxmikanta Tea Estate Factory, P. O. Nathoahat.

*Darjeeling.*

165. Singell Tea Estate Factory, P. O. Kurseong.
166. Sungma Tea Estate Factory, P. O. Nagri Spur.
167. Phoobsring Tea Estate Factory, P. O. Lebong.
168. Castleton Tea Estate Factory, P. O. Kurseong.
169. Namring Tea Estate Factory, P. O. Rungli Rungliot.
170. Kalej Valley Tea Estate Factory, P. O. Sonada.
171. Glenburn Tea Estate Factory, P. O. Darjeeling.
172. Bloomfield Tea Estate Factory, P. O. Darjeeling.
173. Chongtong Tea Estate Factory, P. O. Marybong.
174. Kamalpur Tea Estate Factory, P. O. Bagdogra.
175. Moondakotee Tea Estate Factory, P. O. Sonada.
176. Chamong Tea Estate Factory, P. O. Nagri Spur.
177. Gopaldhara Tea Estate Factory, P. O. Mirik.
178. Lebong and Mineral Spring Tea Estate Factory, P. O. Lebong.
179. Selimbong Tea Estate Factory, P. O. Nagri Spur.
180. Jungpana Tea Estate Factory, P. O. Mahanadi.
181. Rungmook Tea Estate Factory, P. O. Sonada.
182. Tong Song (Dooteriah) Tea Estate Factory, P. O. Sonada.
183. Spring Side Tea Estate Factory, P. O. Kurseong.
184. Ging Tea Estate Factory, P. O. Lebong.
185. Rungli Rungliot Tea Estate Factory, P. O. Rungli Rungliot.
186. Arya Tea Estate Factory, P. O. Darjeeling.
187. Tukdah Tea Estate Factory, P. O. Ghoom.
188. Goomti Tea Estate Factory, P. O. Mohanadi.
189. Mohalderam Tea Estate Factory, P. O. Kurseong.
190. Nurbong Tea Estate Factory, P. O. Tindharia.
191. Sepoydoorah Tea Estate Factory, P. O. Tindharia.
192. Longview Tea Estate Factory, P. O. Pankhabari.
193. Singla Tea Estate Factory, P. O. Darjeeling.
194. Tukvar Tea Co.'s Tukvar Tea Estate Factory, P. O. Darjeeling.
195. Singhia Jhora Tea Estate Factory, P. O. Bagdogra.
196. Bagdogra Tea Estate Factory, P. O. Bagdogra.
197. Nagri Farm Tea Estate Factory, P. O. Nagri Spur.
198. Rungneet Tea Estate Factory, P. O. Darjeeling.
199. Taipoo Tea Estate Factory, P. O. Gayaganga.
200. Ambootia Tea Estate Factory, P. O. Kurseong.
201. Thurbo Tea Estate Factory, P. O. Mirik.
202. Gielle Tea Estate Factory, P. O. Rungli Rungliot.
203. Okayati Tea Estate Factory, P. O. Mirik.
204. Teesta Valley Tea Estate Factory, P. O. Rungli Rungliot.
205. Tumsong Tea Estate Factory, P. O. Marybong.

206. Sivitar Tea Estate Factory, P. O. Mahanadi.
207. Singbulley Tea Estate Factory, P. O. Kurseong.
208. Gayabaree Tea Estate Factory, P. O. Panighatta.
209. Risheehat Tea Estate Factory, P. O. Darjeeling.
210. Poobong Tea Estate Factory, P. O. Ghoom.
211. Sukna Tea Estate Factory, P. O. Sukna.
212. Putinbari Tea Estate Factory, P. O. Matigara.
213. Ord Tea Estate Factory, P. O. Panighatta.
214. Simulbari Tea Estate Factory, P. O. Simulbari.
215. Marionbarje Tea Estate Factory, P. O. Pankhabari.
216. Tirrihanna Tea Estate Factory, P. O. Panighatta.
217. Margaret's Hope Tea Estate Factory, P. O. Tung.
218. Phuguri Tea Estate Factory, P. O. Kurseong.
219. Soom Tea Estate Factory, P. O. Darjeeling.
220. Ring Tong-Hope Town Tea Estate Factory, P. O. Tung.
221. Nagri Tea Estate Factory, P. O. Nagri Spur.
222. Fagu Tea Estate Factory, P. O. Fagu.
223. Pandam Tea Estate Factory, P. O. Darjeeling.
224. Lingia Tea Estate Factory, P. O. Marybong.
225. Sington Tea Estate Factory, P. O. Darjeeling.
226. Selim Hill Tea Estate Factory, P. O. Tindharia.
227. Him Tea Estate Factory, P. O. Ghoom.
228. Dilaram Tea Estate Factory, P. O. Tung.
229. Gangaram Tea Estate Factory, P. O. Gayaganga.
230. Mullootar Tea Estate Factory, P. O. Mahanadi.
231. Pussimbong Tea Estate Factory, P. O. Ghoom.
232. Maharanee Tea Estate Factory, P. O. Tung.
233. Lebong Tea Co.'s Tukvar Tea Estate Factory, P. O. Darjeeling.
234. Barnesbeg Tea Estate Factory, P. O. Darjeeling.
235. Badamtam Tea Estate Factory, P. O. Lebong.
236. Bannockburn Tea Estate Factory, P. O. Lebong.
237. Kamala Tea Estate Factory, P. O. Gangaram.
238. Seeyok Tea Estate Factory, P. O. Mirik.
239. Balasun Tea Estate Factory, P. O. Tung.
240. Ghyabari Tea Estate Factory, P. O. Ghyabari.
241. Matibagan (Matigara) Tea Estate Factory, P. O. Matigara.
242. Gulma Shapore Tea Estate Factory, P. O. Siliguri.
243. New Chamta Tea Estate Factory, P. O. New Chamta.
244. Belgachi Tea Estate Factory, P. O. Panighatta.
245. Nuxalbari Tea Estate Factory, P. O. Nuxalbari.
246. Thanjhora Tea Estate Factory, P. O. Kharibari.
247. Atal Tea Estate Factory, P. O. Hathighisa.
248. Lohaghur Tea Estate Factory, P. O. Panighatta.

249. Lopchu Tea Estate Factory, P. O. Lopchu.
250. Liza Hill Tea Estate Factory, P. O. Marybong.
251. Monteviot Tea Estate Factory, P. O. Kurseong.
252. Panighatta Tea Estate Factory, P. O. Panighatta.
253. Champasuri Tea Estate Factory, P. O. Siliguri.
254. Mohurgong Tea Estate Factory, P. O. Sukna.
255. Turzum Tea Estate Factory, P. O. Nagri Spur.
256. Avongrove Tea Estate Factory, P. O. Sonada.
257. Tindharia Tea Estate Factory, P. O. Tindharia.
258. The Oaks Tea Estate Factory, P. O. Sonada.
259. Kharibari Tea Estate Factory, P. O. Kharibari.
260. Fulbari Tea Estate Factory, P. O. Nuxalbari.
261. Sannyasithan Tea Estate Factory, P. O. Gayaganga.
262. Manjha Tea Estate Factory, P. O. Panighatta.
263. Deomoni & Kristopur Tea Estate Factory, P. O. Hathighisa.
264. Gayaganga Tea Estate Factory, P. O. Gayaganga.
265. Pahargoomia Tea Estate Factory, P. O. Hathighisa.
266. Azamabad Tea Estate Factory, P. O. Nuxalbari.
267. Marapore Tea Estate Factory, P. O. Panighatta.
268. Hansqua Tea Estate Factory, P. O. Gayaganga.
269. Steinthal Tea Estate Factory, P. O. Darjeeling.
270. Mission Hill Tea Estate Factory, P. O. Fagu.
271. Pashok Tea Estate Factory, P. O. Teesta Bridge.
272. Marybong and Kyel Tea Estate Factory, P. O. Marybong.
273. Merry View Tea Estate Factory, P. O. Hatighisa.
274. Soureni Tea Estate Factory, P. O. Mirik.
275. Ceders Tea Estate Factory, P. O. Sonada.
276. Ashapur Tea Estate Factory, P. O. Nuxalbari.
277. Chandmani Tea Estate Factory, P. O. Siliguri.
278. Ambiok Tea Estate Factory, P. O. Fagu.
279. Happy Valley Tea Estate Factory, P. O. Darjeeling.
280. Nischintapur Tea Estate Factory, P. O. Matigara.
281. Sriram-Samabeong Tea Estate Factory, P. O. Fagu.
282. Rangaroon Tea Estate Factory, P. O. Ghoom.
283. Majhua Tea Estate Factory, P. O. Mahanadi.
284. Bhojnarain Tea Estate Factory, P. O. Gayaganga.
285. Gidha Pahar Tea Estate Factory, P. O. Mahanadi.
286. Eden Vale Tea Estate Factory, P. O. Tung.
287. Bejoynagar Tea Estate Factory, P. O. Nuxalbari.
288. Kumai Tea Estate Factory, P. O. Matelli.
289. Doulatpur Tea Estate Factory, P. O. Nuxalbari.
290. Fulbari Patan Tea Estate Factory, P. O. New Chumta.
291. Makaibari Tea Estate Factory, P. O. Kurseong.
292. Rhoni Tea Estate Factory, P. O. Sukna.

## 28. Collieries.

Name of mine.	Name of owner and address.
1. Gopalpur ..	.. Bharmal Pancha, Mejia P. O., Bankura.
2. Hamirpur ..	.. New Hamirpur Colliery Co. (Mrs. A. Cornish and two others), Mejia P. O.
3. Kalikapur ..	.. Harihar Banerjee & Others, Mejia P. O.
4. Gangaramchak ..	.. Misra Mukherjee & Co. (Mangobinda Misra and others) Barhra P. O., Birbhum.
5. Adjai Second ..	.. Adjia Collieries, Ltd., Charanpur P. O., Burdwan.
6. Akhalpur ..	.. Hurriladih Coal Co., Ltd., Charanpur P. O.
7. Anupnagar ..	.. Aluminium Corporation of India, Ltd., Siarsol, Rajbari P. O.
8. Bankola ..	.. Burrakur Coal Co., Ltd., Ukhra P. O., Burdwan.
9. Banksimula ..	.. Bengal Coal Co., Ltd., Charanpur P. O., Burdwan.
10. Baraboni East ..	.. East Baraboni Coal Co., Ltd., Charanpur P. O.
11. Baraboni Selected ..	.. S. B. Banerjee & Sons, Charanpur P. O.
12. Barmondiha ..	.. New Beerbhoom Coal Co., Ltd., Sitarampur P. O., Burdwan.
13. Begunia ..	.. Karamchand Thapar, Barakar P. O., Burdwan.
14. Bejdih ..	.. Equitable Coal Co., Ltd., Sundarchak P. O., Burdwan.
15. Belbaid ..	.. Shewkaran & Sons, Toposi P. O., Burdwan.
16. Benalee ..	.. Chandanmull Indrakumar, Raniganj P. O., Burdwan.
17. Bhagrand ..	.. New Bhagrand Coal Co., Salaripur P. O., Burdwan
18. Bhagran (Janson) ..	.. Janson Mining Co., Samdi P. O., Burdwan.
19. Bhutdoba ..	.. Bhagirathi Ghusick Coal Concern, Kalipahari P. O.
20. Binodikatta ..	.. Sewnarain Gopalka, Samdi P. O.
21. Bonbohal ..	.. G. R. & R. R. B. & Sons, Chora P. O., Burdwan.
22. Borachuck ..	.. Krishna Bilas Chakravarty, Sitarampur P. O.
23. Burra Dhemu ..	.. Burra Dhemu Coal Co., Ltd., Sitarampur P. O.
24. Chalbalpur ..	.. K. L. Selected Coal Concern, Kalipahari P. O.
25. Chalbalpur Khas ..	.. Upendra Nath Panday, Siarsol Rajbari P. O., Burdwan.
26. Chapui ..	.. Maharaja Shrish Chandra Nandy, Kalipahari P. O.
27. Charanpur ..	.. Apcar Collieries, Ltd., Charanpur P. O.
28. Charanpur North ..	.. Sushil Kumar Mukherjee, Charanpur P. O.
29. Chatrisganda ..	.. Samla Collieries, Ltd., Pandaveswar P. O., Burdwan.

Name of mine.	Name of owner and address.
30. Churulia ..	Churulia Coal Co., Ltd., Churulia P. O., Burdwan.
31. Dabar ..	N. K. Tewary and others, Samdi P. O.
32. Damagurria New ..	New Damagurria Coal Co., Ltd., Kulti P. O., Burdwan.
33. Damoda ..	Damodar Coal Co., Ltd., Searsol P. O., Burdwan.
34. Damra ..	Kalapahari Coal Co., Ltd., Kalipahari P. O.
35. Daroolah ..	New Beerbhoom Coal Co., Ltd., Pandaveswar P. O.
36. Dhadka ..	Dhadka Colliery Co., Ltd., Asansol P. O., Burdwan.
37. Dhemu Main ..	Dhemu Main Collieries, Ltd., Sitarampur P. O.
38. Dishergarh Pure ..	Pure Dishergarh Colliery Co., Sitarampur P. O.
39. Dishergarh West ..	Equitable Coal Co., Ltd., Dishergarh P. O., Burdwan.
40. Fattehpur ..	K. B. Chakraverty, Sitarampur P. O.
41. Ghusick ..	Ghusick & Muslia Collieries, Ltd., Kalipahari P. O.
42. Ghusick ..	Coal and Mineral Syndicate, Ltd., Kalipahari P. O.
43. Ghusick West ..	Hriday Narain Singh, Kalipahari P. O.
44. Govindpur ..	Samla Govindpur Collieries Co., Pandaveswar P. O.
45. Haripur ..	Chandanmull Indrakumar, Chora P. O.
46. Haripur North ..	Kanai Lal Dutt, Chora P. O.
47. Jambad ..	Devi's Jambad Coal Concern, Ltd., Kajoram P. O., Burdwan.
48. Jambad ..	North Adjai Coal Co., Ltd., Kajoram P. O.
49. Jambad Central ..	Central Jambad Coal Co., Ltd., Chora P. O.
50. Jambad East ..	Amalgamated Jambad Syndicate, Ltd., Kajoram P. O.
51. Jambad-Kajora ..	Jambad Kajora Colliery Co., Ltd., Ukhra P. O.
52. Jambad Khas ..	Fulchand & Sons, Ukhra P. O.
53. Jambad Lower ..	Central Jambad Coal Co., Ltd., Chora P. O.
54. Jambad Pure ..	Pure Jambad Collieries, Ltd., Chora P. O.
55. Jambad Real ..	Real Jambad Coal Co., Ltd., Chora P. O.
56. Jambad Selected ..	Devji Ghelabhai & Bros., Kajoram P. O.
57. Jambad South ..	South Jambad Coal Co., Ltd., Kajoram P. O.
58. Jamehari Central ..	Jamerhari Coal Co., Siarsol Rajbari P. O.
59. Jamehari East ..	Harsookhdas Balkissendas, Raniganj P. O.
60. Jamehari Khas (New Plot) ..	Searsol Raj Wards Estate (Kumar Pashupatinath Malia and Kumar Kehitipatinath Malia), Siarsol, Rajbari P. O.
61. Jamehari Selected ..	Jagmohan Kishorilal, Raniganj P. O.
62. Jamuria ..	Equitable Coal Co., Ltd., Charanpur P. O.
63. Jamuria Nos. A & B Shafts ..	Equitable Coal Co., Ltd., Jamuria P. O.
64. Jamuria West ..	West Jamuria Coal Co., Ltd., Charanpur P. O.
65. Jote Dhemu ..	Jote Dhemu Colliery Co., Ltd., Ukhra P. O.
66. Jote Janaki ..	Singaran Coal Syndicate, Ltd., Toposi P. O.
67. Jote Janaki Khas ..	Banerjee Santan, Toposi P. O.
68. Kajora ..	Guzdar Kajora Colliery Co., Ltd., Kajoram

Name of mine.	Name of owner and address.
69. Kajora	.. K. C. Pal Choudhury, Kajoram P. O.
70. Kajora	.. Roy Dutta & Co., Kajoram P. O.
71. Kajora (Dutta's)	.. Dutta's Kajora Coal Co., Ltd., Kajoram P. O.
72. Kajora Jambad Selected	.. Selected Kajora Jambad Coal Co., Ukhra P. O.
73. Kajora Khas	.. Khas Kajora Coal Co., Ltd., Kajoram P. O.
74. Kajora, Prossono Dutta	.. Prossono Coomar Datta & Sons, Kajoram P. O.
75. Kajora Pure	.. Pure Kajora Coal Co., Ltd., Kajoram P. O.
76. Kajora Real	.. Sree Sree Ishwar Radha-Damodar Chandra Jiu Thakur (Through His sebaita Ram Raghah Hazra & Brothers), Kajoram P. O.
77. Kajora Upper	.. C. Bhowingsa, Kajoram P. O.
78. Kalipahari	.. Ghusick & Muslia Collieries, Ltd., Kajoram P.O.
79. Karahahir East	.. Totaldas Singhi, Samdi P. O.
80. Kendah Central	.. Baijnath Ramjiwan Marwari, Toposi P. O.
81. Kenda Khas	.. Khas Kenda Colliery, Ltd., Chora P. O.
82. Kenda New	.. New Beerbhoom Coal Co., Ltd., Raniganj P. O.
83. Kenda South	.. Fulchand & Sons, Toposi P. O.
84. Kendra	.. Samla Collieries, Ltd., Pandaveswar P. O.
85. Kudika	.. New Begunia Coal Co., Salanpur P. O.
86. Kuardi	.. Kuardi Coal Co., Ltd., Kalipahari P. O.
87. Kumardihi	.. Chandanmull Indrakumar, Ukhra P. O.
88. Lutchipur New	.. Prince Abbas Mirza, Sitarampur P. O.
89. Madhabpur	.. Chandanmull Indrakumar, Ondal P. O.
90. Mandarboni	.. Samla Mandarboni Colliery Co., Pandaveswar P. O.
91. Methani	.. Aldih Coal Co., Ltd., Sitarampur P.O.
92. Modhujore	.. Modhujore Coal Co., Ltd., Chora P.O.
93. Moira	.. Pioneer Collieries, Ltd., Ukhra P.O.
94. Monoharbahal	.. Chandanmull Indrakumar, Asansol P.O.
95. Mosila North	.. North Mosila Colliery Co., Kalipahari P.O.
96. Mundulpur	.. Mundulpur Coal Co., Ltd., Nandi P.O.
97. Muslia	.. Ghusick and Muslia Collieries, Ltd., Kalipahari P.O.
98. Nandi	.. Mondal Brothers, Nandi P.O., Burdwan.
99. Nandi Central	.. Jiban Krishna Banerjee, Nandi P.O.
100. Nawpara South	.. M. N. Bhattacharjee, Asansol P.O.
101. Nimcha	.. Chandanmull Indrakumar, Raniganj P.O.
102. Northbrook	.. Agarwalla Bedi and Co., Raniganj P.O.
103. Nuni	.. K. P. Roy, Asansol P.O.
104. Ondal New	.. Ondal Coal Co., Ltd., Ondal P.O., Burdwan.
105. Palasdiha West	.. Palasdiha Coal Co., Asansol P.O.
106. Porascole	.. Chandanmull Indrakumar, Kajoram P.O.
107. Parasea	.. B. Mukerjee and Co., Kajoram P.O.
108. Patmohna	.. North Damuda Coal Co., Ltd., Sitarampur P.O.
109. Poidih	.. Bengal Coal Co., Ltd., P.O. Sundarchak.
110. Poniati	.. Poniati Collieries, Ltd., Charanpur P. O.
111. Poniati-Baraboni	.. Hemanta Kumar Nag, Charanpur P.O.
112. Pottery	.. Burn and Co., Ltd., Raniganj P.O.
113. Pretoria	.. Sibpur Coal Co., Ltd., Charanpur P.O.



Name of mine.	Name of owner and address.
114. Radhamadhabpur	.. Ghusick and Muslia Collieries, Ltd., Kalipahari P.O.
115. Ramnagar	.. Bengal Iron Co., Ltd. (In Liquidation), Kulti P.O.
116. Ramnagar	.. Samla Collieries Ltd., Pandaveswar P.O.
117. Samla	.. Samla Collieries, Ltd., Pandaveswar P.O.
118. Samla-Baidya-nathpur	.. Bhagawandas Agarwalla, Pandaveswar P.O.
119. Sankerpur	.. Burn and Co., Ltd., Ukhra P.O.
120. Satgram Central	.. Hursookhdas Balkissendas, Kalipahari P.O.
121. Satgram Khas	.. L. A. Creet, Raniganj P.O.
122. Satgram Modern	.. Modern Satgram Coal Co., Ltd., Raniganj P.O.
123. Satgram New	.. New Satgram Coal Co., Ltd., Searsol Rajbari P.O.
124. Sathpokoria	.. Sathpokoria and Asansol Collieries, Ltd., Asansol P.O.
125. Searsol	.. Searsol Coal Co., Ltd., Raniganj P.O.
126. Searsol Kajora Selected	.. Searsol Kajora Selected Colliery Co., Raniganj P.O.
127. Searsol Khas	.. Searsol Raj Wards Estate, Searsol Rajbari P.O.
128. Searsol Selected	.. Puranmal Sreeniwass, Raniganj P.O.
129. Sibpur	.. Katras Jharia Coal Co., Ltd., Charanpur P.O.
130. Sibdaspur	.. Badanmal Sindi, Salanpur P.O.
131. Siduli	.. Siduli Colliery Co., Ukhra P.O.
132. Sitalpur	.. Bengal Coal Co., Ltd., Dishergarh P.O.
133. Sitalpur	.. Sitalpur Coal Co., Ltd., Ukhra P.O.
134. Sitalpur Khas	.. N. H. Ojha and Co., Ltd., Ukhra P.O.
135. Sitalpur Pure	.. Pure Sitalpur Coal Concern, Ltd., Ukhra P.O.
136. Sodepur (9 and 10 pits)	.. Bengal Coal Co., Ltd., Sundarchak P.O.
137. Sonachora	.. Mangalpur Colliery Co., Raniganj P.O.
138. Sripur (1,2 and 3 pits)	.. Lodna Colliery Co. (1920), Ltd., Kalipahari P.O.
139. Sudih	.. Morarji Mulraj and Co., Sitarampur P.O.
140. Toposi	.. Bansra Coal Co., Ltd., Toposi P.O.
141. Vanora Khas (or South East Baraboni)	.. Maharaja S. C. Nandy, Charanpur P.O.
142. Victoria	.. New Beerbhoom Coal Co., Ltd., Kulti P.O.
143. Victoria West	.. New Beerbhoom Coal Co., Ltd., Barakar P.O.
144. Napur	.. Satis Chandra Sinha, Raniganj P.O.
145. Raniganj Real	.. Real Raniganj Coal Co., Ltd., Raniganj P.O.
146. Ratibati	.. Ratibaty Collieries, Ltd., Kalipahari P.O.
147. Salanpur	.. New Sergarh Coal Co., Salanpur P.O.
148. Salanpur North East	.. A. R. Acharjee and another, Samdi P.O.
149. Samla South	.. South Samla Colliery Co., Pandaveswar P.O.
150. Mondal's Sanctoria	.. B. N. Mondal and Co., Dishergarh P.O.

**29. Plumbing Firms.***Calcutta.*

1. J. B. Norton & Sons, Ltd., Norton Buildings.
2. S. K. Chakravorti, Ltd., Mission Row.
3. Mackintosh Burn, Ltd., 8, Clive Street.
4. O'Neil & Co., Ltd., 162, Bowbazar Street.
5. B. K. Dutt & Co., Ltd., 1, Pataldanga Street.
6. P. N. Nag & Son, 34A, Central Avenue.
7. P. P. De & Co., 54, Ezra Street.

**30. Bakeries, Biscuit and Confectionery Factories.***Calcutta.*

1. A. Firpo, Ltd., 18-2, Chowringhee Road.
2. Great Eastern Hotel Bakery, 29, Waterloo Street.
3. Kohinoor Biscuit Co., 35, Chattawalla Gullee, P. O. Bowbazar.

*24-Parganas.*

4. Britannia Biscuit Factory, Birpara 1st Lane, Ghughudanga.
5. Lily Biscuit Factory, 3, Romakanta Sen's Lane, Ultadanga.
6. The Bengal Biscuit Factory, Ltd., 2B, Bagmari Road.
7. T. P. Bose & Co., Ltd., "Tara Vita Food Factory", 13/2, Raja Manindra Road, P. O. Cossipore.

*Howrah.*

8. The New Delhi Biscuit Co., 6, Raghav Koley Lane, P. O. Salkia.

**31. Automobile Engineering Workshops.***Calcutta.*

1. Breakwell & Co.'s Works, 44, Free School Street.
2. A. Milton & Co.'s Works, 156, Dhurumtolla Street.
3. The Indo-British Motor Industry, 157A, Dhurumtolla Street.
4. Lucas Indian Service, Ltd., 46, Wellesley Street.

5. Walford Transport, Ltd., 117, Park Street.
6. The Russa Garage and Electrical Works, Ltd., 3, Mangoe Lane.
7. Dewar's Garage & Engineering Works, 14, British Indian Street, P. O. Esplanade.
8. National Motors, 113, Park Street.
9. Peter Motor Works, 3A, Metcalfe, P. O. Dharamtala.
10. Howrah Motor Co., Ltd. (Engineering Deptt.), P.5 and 6, Mission Row Extension.

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11. Steuart & Co.'s Workshop, 38/1, Punditya Road, P. O. Ballygunge.
12. Great Indian Motor Works, Studebaker Service Station, 33, Rowland Road, Ballygunge, P. O. Elgin Road.
13. French Motor Car Co.'s Works, 234/3, Lower Circular Road, P. O. Elgin Road.
14. G. Mackenzie & Co.'s Motor Works, 208, Lower Circular Road, P. O. Park Circus.
15. Allen Berry & Co.'s Workshop, 62, Hazra Road, Ballygunge.
16. Spence, Limited, Motor Repairing Works, 23, Convent Road, Entally.
17. International Tires and Motors, Ltd., 2, Rowland Road, Ballygunge, P. O. Elgin Road.
18. National Motor Works, 66, Hazra Road, P. O. Ballygunge.
19. National Motors Workshop and Garage, 47, Beniapukur Road, P. O. Entally.

**32. Twenty-four of the more important Insurance Companies at work in Bengal with addresses of their Calcutta offices.**

1. Bombay Mutual Life Assurance Society, Limited, 100, Clive Street, Calcutta.
2. British India General Insurance Co., Ltd., 2, Old Court House Corner, Calcutta.
3. Calcutta Insurance Co., Ltd., 86, Clive Street, Calcutta.
4. General Accident Fire & Life Assurance Corporation, Ltd., 7, Hare Street, Calcutta.
5. Hindusthan Co-operative Insurance Society, Ltd., 6A, Surendra Nath Banerjee Road, Calcutta.

6. India Equitable Insurance Co., Limited, 102, Clive Street, Calcutta.
  7. Lakshmi Insurance, Ltd., 7, Esplanade East, Calcutta.
  8. Liverpool London and Globe Insurance Company, 26, Dalhousie Square, Calcutta.
  9. London & Lancashire Insurance Company, Ltd., 2, Fairlie Place, Calcutta.
  10. Manufacturers Life Insurance Co., 27, Dalhousie Square, Calcutta.
  11. Metropolitan Insurance Co., Ltd., 4B, Council House Street, Calcutta.
  12. National Indian Life Insurance Company, Ltd., 12, Mission Row, Calcutta.
  13. National Insurance Co., Ltd., 7, Council House Street, Calcutta.
  14. North British & Mercantile Insurance Co., Ltd., 101/1, Clive Street, Calcutta.
  15. Ocean, Accident & Guarantee Corporation, Ltd., 32, Dalhousie Square, Calcutta.
  16. Prudential Assurance Co., Ltd., 8, Clive Street, Calcutta.
  17. United India Life Assurance Company, Ltd., 21, Chittaranjan Avenue South, Calcutta.
  18. New India Assurance Co., Ltd., 9, Clive Street, Calcutta.
  19. Bharat Insurance Co., Ltd., Bharat Bhowan, 3, Chittaranjan Avenue South, Calcutta.
  20. Oriental Government Security Life Assurance Co., Ltd., 2, Clive Row, Calcutta.
  21. Sun Life Assurance Co. of Canada, Security House, 102, Clive Street, Calcutta.
  22. Bombay Life Assurance Co., Ltd., 10, Clive Row, Calcutta.
  23. China Fire Insurance Co., Ltd., 8, Clive Street, Calcutta.
  24. Empire of India Life Assurance Co., Ltd., 28, Dalhousie Square, Calcutta.
- 33. Thirty of the more important Banks at work in Bengal with addresses of their Calcutta offices.**
1. Allahabad Bank, 6, Royal Exchange Place, Calcutta.
  2. American Express Company Incorporated, 14, Government Place East, Calcutta.
  3. Bank of Baroda, 11, Clive Street, Calcutta.

4. Bank of India, Bombay, 9A, Clive Street, Calcutta.
5. Bengal Central Bank, Ltd., 86, Clive Street, Calcutta.
6. Central Bank of India, 100, Clive Street, Calcutta.
7. Chartered Bank of India, Australia and China, Chartered Bank Buildings, Clive Street, Calcutta.
8. Comilla Banking Corporation (Comilla), 4, Clive Ghat Street, Calcutta.
9. Comilla Union Bank (Comilla), 10, Clive Street, Calcutta.
10. Eastern Bank, Ltd., 9, Clive Street, Calcutta.
11. Grindlay and Company, Ltd., 6, Church Lane, Calcutta.
12. Hongkong and Shanghai Banking Corporation, 31, Dalhousie Square, Calcutta.
13. Imperial Bank of India, 1, 2 and 3, Strand Road, Calcutta.
14. Karnani Industrial Bank, 3, Synagogue Street, Calcutta.
15. Lloyds Bank, 101/1, Clive Street, Calcutta.
16. Mercantile Bank of India, 8, Clive Street, Calcutta.
17. National City Bank of New York, 4, Clive Street, Calcutta.
18. National Bank of India, 104, Clive Street, Calcutta.
19. Nederlandsche Indische Handels-Bank, 1, Royal Exchange Place East, Calcutta.
20. Nederlandsche Handel-Maatschappij, Law Buildings, 8, Royal Exchange Place, Calcutta.
21. P. and O. Banking Corporation, Chartered Bank Buildings, Clive Street, Calcutta.
22. Punjab National Bank (Lahore), 135/136, Canning Street, Calcutta.
23. Thomas Cook & Sons, Ltd., 4, Dalhousie Square East, Calcutta.
24. Yokohama Specie Bank, 102-1, Clive Street, Calcutta.
25. Nath Bank, Ltd., 135, Canning Street, Calcutta.
26. The Luxmi Industrial Bank, 84, Chowringhee Road, Calcutta.
27. Bank of Behar, 10, Canning Street, Calcutta.
28. Benares Bank, Ltd., 7A, Clive Row, Calcutta.
29. Bhawanipore Banking Corporation, 47, Ashutosh Mukherjee Road, Calcutta.
30. Bank of Commerce, Ltd., 12, Clive Street, Calcutta.

**34. Gas Companies.***24-Parganas.*

1. The Oriental Gas Works, 13 and 14, Canal West Road, Sealdah.
2. Bengal Aerating Gas Factory, Ltd., 42, Garden Reach.
3. Indian Oxygen and Acetylene Co., Ltd., 138, Belliaghatta Road, P. O. Entally.

*Howrah.*

4. The Oriental Gas Works, 427, Grand Trunk Road, Howrah.

*Midnapore.*

5. Bengal-Nagpur Railway Gas Works, Kharagpur.

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