

TYPES OF MANPOWER REQUIRED FOR A PROJECT

While preparing the detailed project report, the entrepreneur must have made a detail analysis of the manpower required for his project. He has to make a detail estimate of the quality, quantity and the types of manpower required for running his project. So while going through the actual execution of the project, he has to make a detail study of manpower requirement of his project. For this reason, he has to make a proper job analysis, job description, and job specification. Accordingly the entrepreneur has to forecast the manpower needs of his project. While doing so the entrepreneur has to take into account the number of posts created in the organisation structure. How much managerial, how much operational, how much clerical, how much skilled, how much unskilled and how much allied persons are required should be calculated properly. A precise division, grouping and distribution of work is essential for this purpose. The detail study of the organisation structure shall be helpful to do this.

The entire work of the project should be suitably divided into various departments, divisions, sections and jobs and manpower requirement should be based on that. While deciding the manpower requirement, the jobs, duration of employment, work load, efficiency and financial

Different sources of Recruitment

The sources of recruitment may be broadly divided into two categories, such as; internal sources and external sources. Internal sources includes—transfer, promotion and own training centers. External sources include—advertisement, campus interview, walk-in-interview, employment fair or job mela, consultancy organizations, employment exchanges, direct recruitment, unsolicited applications, recommendations, labour contractors, placement cell/employment bureau, other similar organizations, etc.

Internal Sources

(a) Transfer. Under this system, recruitment is made by transferring employees from one post to another. The employer makes a search effort among its employees and the eligible/capable/suitable individuals are shifted from their posts to other posts or new posts and the process is called transfer. Transfer usually does not involve any extra financial benefits to an employee. Employees are simply shifted from one job to another or one place to another for administrative convenience. The nature of duties, responsibilities, status, etc. of the employees usually does not change and remains same in case of a transfer. The new post or job is usually similar in nature. This is an easier method of recruitment to solve some immediate problems.

(b) Promotion. Under this system, positions or posts are filled up by upgrading persons to higher status by offering them promotions to higher posts. Here, there is a change in the nature of duties, responsibilities, status, remuneration, privileges, etc. It is a process of filling vacancies of higher posts by individuals from lower grade to higher grade from within the organization. It is a sort of career advancement

for an employee. Promotions are usually based on seniority or merit or both. It may be time bound or may depend on the vacancy position. It offers a scope for self-development for an employee.

(c) **Own Training Centers.** A large number of organizations have opened their own training centers where they take trainees on a regular basis to develop skilled manpower as per their own need so that they can be recruited as and when they are required. They provide both theory as well as practical skill to the trainees for a definite period of time. Under this system, fresh students are selected and are given training in various skills. Some of the successful trainees are absorbed by the organization itself and some find employment elsewhere. Such training centers are owned and managed by the employer and are provided the entire required infrastructure.

External Sources

(a) **Advertisement.** Under this system, applications are invited from eligible candidates for different posts through open advertisement in news papers, magazines, radios, TVs, etc. Such practices are common by big organizations while recruiting for higher posts or post with higher skills or when the number of post is large. Such advertisements are drafted carefully to create interest in the eligible candidates. This type of advertisements reaches a large number of people spread over a large area. This type of advertisement is essential when the management is interested to select the best talent from a large number of applicants. But this process is costly as well as time consuming.

(b) **Campus Interview.** Now a days recruiters go to different technical, professional, management and allied institutions for the purpose of selecting young and fresh talent for their manpower requirement. They conduct tests, interview, etc. for the final year students or just passed out students and offer them placement in their organization. The placement cells of such institutions provide all necessary help to conduct test, interviews, etc. in the institution itself. Such selected candidates are usually appointed as trainees for a definite period and after successful completion of their training/probation, posted or appointed as regular employees.

(c) **Walk-in-Interview.** It has become a fashion today for the employers to organize walk-in-interviews at different town and cities to recruit manpower for their organizations. The venue, date, eligibility criteria and other formalities are advertised in the local news paper earlier and the applicants come to the centers to face the selection process. There is no need of prior applications or information by the candidates. They simply bring their bio-data and submit just before the interview.

Such interviews are usually conducted in big hotels or at prominent places where such facilities can be available at very short notice. Under this system urgent manpower requirement can be solved.

(d) Employment fair/Job Mela. It has become a fashion today to organize employment fair or job mela at important places for the purpose of attracting large number of applicants for the purpose of recruitment. A number of employers or consultants combined together organize the fair in important cities and towns giving wide publicity to the event to attract a large numbers of job seekers. The employers/consultants open stalls inside the mela where they display their requirement. Eligible/interested candidates come and approach the stall to make queries about the vacancies. They submit their bio-data at the stall and after preliminary screening they may be called for interview at a specified place and time where the recruitment process is carried on.

(e) Employment consultant. Consultancy organizations providing manpower solutions are larger in number and provide specialized services to the employers by providing appropriate manpower as per their need. They remain in touch with number of organizations to collect their orders for manpower supply. They also remain in touch with various sources of different types of manpower. They advertise, conduct tests and interviews to select the appropriate candidates and submit the list of selected candidates to the employers for issue of appointment letters. They are professionals in this field and perform their jobs with perfection for which they charge certain fees from the employer for the service. Employers are usually not skilled in the art of recruitment and selection and as a result there may be wrong selection. They also do not have much time for this job hence take the services of the professional organizations to select manpower for their own requirement. This type of recruitment is usually done for skilled personnel and for top managerial jobs.

(f) Employment Exchange. This is a very old source of recruitment of manpower. Government employment exchanges are there through out the country and employers take advantage of this source. Job seekers go to employment exchanges and get their names registered and employers can readily get the information about various types of manpower. In some cases recruitment through employment exchange is compulsory. The employment exchange does not charge any fees to the employers or to the job seekers. Recruitment of skilled, semiskilled and non-skilled manpower is made for lower and middle level of management. It acts as an agent between the job seekers and the employers.

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(g) **Direct Recruitment.** Under this system the employer notifies the requirement of manpower in its notice board which is usually at the factory gate. Interested applicants report at the venue at the specified time for selection. This is an old method of recruitment usually adopted for the purpose of recruitment of non skilled casual workers.

(h) **Unsolicited Applications.** Many candidates submit application for different post at different times even if there is vacancy in the organization. The personnel department usually maintains record of such applications. Such applicants can be called in for the purpose of recruitment whenever there is vacancy in the organization. This is a common practice in almost all organizations in private sector.

(i) **Recommendation.** Sometimes appointments are made based on the recommendations made by committees, important persons, friends and relatives, employees, retired employees, government (for and outstees or displaced persons) and others, provided such persons are qualified for the posts and possess the right skill required for the posts available.

(j) **Labour Contractor.** Large scale industries usually require a large number of unskilled workers but do not appoint them rather they hire their services through labour contractors. The labour contractors supply such unskilled workers in sufficient numbers as and when required. The contractors appoint them and make their pay roll. Such contractors make payments to the workers at their own rate agreed and collect the payment from the organization at timely intervals. They are usually registered contractors with the organization.

(k) **Placement cell/Employment Bureau of Universities and Institutes.** Different universities, professional institutions and other academic institutions maintain records of their passed out students. This information is usually maintained by the placement cell or employment bureau created specifically for the purpose of arranging jobs for the passed out students. They remain in touch with various employers and send the bio-data of the students for the purpose of recruitment. Employers also take advantage of the facilities provided by such institutes to collect information about different candidates for different posts.

(l) **Other Similar Organizations.** An organization does not run smoothly with fresher, they also require some experienced people to run the business. Such experienced people are usually employed in different organizations. So, for the recruitment of experienced persons one has to depend on the similar organizations, competitors, suppliers, dealers who have adequate number of experienced persons. One has to attract those experienced persons of other organizations by offering better remuneration, facilities, perquisites, etc. In this way an organization can get skilled and experienced persons from different organizations.

SELECTION

Selection should not be viewed as a process of rejection. Selection is usually understood to be the process of choosing an alternative from the alternation available. But, so far human resource management is concerned, selection refers to the process of attracting eligible and prospective candidates for an organisation. This is most of the times confused with recruitment. Recruitment is a method or tool to choose the right persons for the right posts. But, selection is a system which includes recruitment in its field and hence recruitment is a sub-system under it.

Selection is the process of finding out the perfect match between the requirement of the jobs and the capabilities of the applicants. Selection is possible only when there are alternatives. If no alternative is available

one shall be forced to accept anyone available. Selection is a process which is used as the identification of tool for procuring human resources based on skill, knowledge, qualification, experience, abilities, talent, etc. Different types of tools may be used for selection of candidates for different posts. The selection criteria shall be different for different posts. The characteristics required by a person to perform a specific job are determined and as far as practicable selection has to be made depending on such requirement. The selection criteria has to be decided by the Personnel Manager and should be best suited to the requirement. The selection process includes :

- (1) Inviting applications.
- (2) Screening the applications received.
- (3) Conducting tests, interviews, etc.
- (4) Conducting physical and medical fitness examination.
- (5) Collecting references and checking the antecedents.
- (6) Verifying the certificates.
- (7) Issue of selection letters after final selection.

Inviting Applications. The first step in the selection process is to invite applications from the eligible candidates. Application form may be designed and supplied to the applicants on request or the proforma may be advertised according to which the applicants shall apply. The main problem here is to design the proforma of application carefully so that the application will reveal the necessary information which are essential for screening them. The format may be designed in such a manner that the applicants have to give the details of their education, training, experience, age, family back ground, previous employment, previous salaries, reasons for leaving the previous jobs, extra-curricular activities, hobbies, etc. The proforma may be designed depending on the post and the information required.

Screening the Applications. A number of applications may be received and all the applicants may not be called for tests or interviews. Some of the applicants may be rejected at the application stage due to any reasons. Hence, there is the need of making a preliminary screening of the applications received. The main idea behind this sort of screening is to minimise the number of applicants to make the selection process easy and effective. At this stage the unsuitable or unfavourable applicants may be rejected. For this, there may be a screening committee. Who is to go through the application to sort out the most suitable applicants fit to be called for further tests/interviews. The committee members make a policy for screening the applications and accordingly make a list of the applicants qualified in the preliminary screening. This needs analysing the applications to find out the reasons for selection or rejection.

Conducting Tests/Interviews: After the preliminary screening is over, the short-listed applicants may be called for employment tests which may include a written examination, interview, group-discussion, etc. to test the skill, intelligence, knowledge, aptitude, personality etc. There are a varieties of tests to examine the specific qualities and abilities of the applicants. Such tests may be designed depending on the type of person required for specific post. The questions in the written examination as well as interview should be designed in such a manner that the applicants can be evaluated from all possible angles to make the selection process scientific. Different types of testing tools may be used to examine the applicants.

Usually the applicants found suitable in the written examinations are called for interviews, because conducting interviews is a time-taking affair. So, only a limited number of successful candidates of the written examination may be called for interview. Interview may be of two types i.e., interview by a committee and interview by an expert in the relevant field. The purpose of both the interviews should be to select the best suited applicant for the post. As far as practicable such interviews should be conducted only by professionals who have adequate knowledge and experience in such art. The interviewer shall make a list of the suitable candidates for the post in order of their merit.

Conducting Physical and Medical Fitness Tests. All the candidates qualified in the interviews should be called for a test of physical fitness to be conducted by a group of experts. The physical tests may include running, swimming, jumping, driving, cycling, etc. The physical examination may depend on the nature of job to be handled by the individual. Apart from the physical test, there may be a medical examination of the candidates to check the eye sight, ears, heart, kidney, etc. to ensure that there is no organic disease or invalidity in the candidate and is otherwise suitable for the post. Such tests may be done by a team of doctors belonging to different specialized fields. The purpose of the medical test is to handle the job efficiently and ensure that the candidate's fitness meets the job requirement.

Collecting References and Checking the Antecedents. After the medical and physical tests are over, there is the need of making a collection of information about the candidate from the list of references. Usually, the applicants give the names of those persons who will give favourable report. Apart from that the employer may write to the former employer of the applicant, to the institution where he was reading or to any other person who might be knowing the person well. There is also the need of checking the past records of the applicant including the

reports of the local police stations where he had been staying in the past. Now-a-days private detective agencies perform these types of jobs on payment of some remuneration or fees.

Verifying the Certificates. After all the above processes are over, the applicant may be called once again with his original certificates for the purpose of verification to see that the certificates furnished are authentic. If required the authorities issuing such certificates may be referred to.

Issue of Selection Letter after Final Selection. All the successful candidates are to be ranked in order of their merit and final selection may be made depending on the number of posts lying vacant. Appointment/selection letters may be issued to the successful applicants in order of their rank and may be given a time limit to report for joining. If any candidate fails to turn up, the next rank-holder may be issued selection letter. It is not a guarantee that the persons issued selection letters may ultimately join the organisation because by that time he or she might have got better opportunities. So the merit list prepared shall be helpful to issue selection letters to the next best candidates.

TRAINING

Training is a learning process which imparts skill, knowledge, attitude, behaviour, etc. to an individual to make the performance of jobs as per plans. It is a means of educating employees aimed at increasing resources in them to perform different jobs with perfection and as per standards. Training is also regarded as the transfer of skill, knowledge, etc. from the trainers to the trainees with specific objectives. It is aimed at improving the performance of individuals in doing tasks and achieving results. Training helps better performance of works and achievement of the desired results with minimum possible resources. Training can be defined as the process of learning by the employees for the employers. Training is essential before a person is given an independent assignment. Hence, after the recruitment and selection of employees, there is the need of providing adequate training to those new employees before assigning them any activities. Training helps the employees to enhance their efficiencies to contribute more towards the achievement of the goal of the enterprise.

Training is a process of learning by the employees for the employers.

Training Methods

Training may be organised on the job or off the job. It may be theoretical as well as practical. It may be done by external agencies or by the internal trainers or experienced persons. There can be various methods of training to be adopted which depend on the objectives of the training, nature of training, type of trainees, cost of training, availability of quality trainers, availability of training facilities, affordability of the management, etc. There shall be different methods of training for

executives, supervisors and workers. Different methods of training may also be recommended for different types of jobs handled by the executives, supervisors, workers and others. When we speak of training, it is usually confined to non-executives *i.e.*, the supervisors and workers. The training to be given to the managers and executives are usually known as "Management Development Programmes". Training given to the employees can be classified into three categories such as (i) On-the-job training, (ii) Off-the-job training, and (iii) Vestibule training.

On-the-job Training

1. Under-studies. Under this method of training, the trainee is placed under an experienced person as an assistant or sub-ordinate, who is to acquire skill, knowledge, experience by doing the job under the direct supervision and guidance of the experienced person. This process will enable the trainee to develop himself as a capable person to handle the jobs independently. Working under an experienced person will be a good learning process for a new person.

2. Coaching by Experts on the Jobs. Under this method the trainees are taken to the spots where the works are being performed. Different expert trainers of different jobs train the trainees the art of performing the jobs. They demonstrate the jobs by performing them in front of the trainees so that the trainees get the chance of learning on the spots. The trainees are also given chances to handle the jobs themselves. The trainees develop the art of doing things themselves and this creates confidence in the trainees as well as the trainers. This type of coaching by experts followed by handling the jobs by the trainees themselves makes the training perfect and the trainees become capable of performing the jobs independently.

3. Job Rotation. Under this system, the trainees get the opportunities of learning different jobs during their employment. They are not specifically trained only for one job but are trained on various jobs on rotation basis so that they get thorough knowledge on different jobs. After they are trained in one job, they are sent for training to another job and in the process they acquire good experiences of different jobs of the organisation. This is known as job rotation in which the trainees are periodically rotated from one job to another.

Off-the-Job Training

1. Classroom Training. Under this type of training, training courses are organised for the employees either inside the organisation or outside the organisation. Lecturers or instructors act as trainers, teach the topics and give adequate technical and theoretical knowledge about the activities to be performed. This includes both theory as well

as practical classes. For such types of training, there may be the use of models, slides, overhead projectors, video, audio, films, computers, etc. to train the employees. Persons training are usually experts and can handle large group of trainees at a time. Here, there is a good chance of interaction between the trainers and the trainees or among the trainees themselves. This method is also known as lecture method.

2. Conference. Under this method of training, a small group of trainees are selected and they work together to train themselves. They make open discussion, exchange ideas and experience, share the knowledge. They learn together to come to conclusions or for solutions to different problems and develop new techniques, skill, etc. in them. This type of training is suitable for homogenous trainees preferably highly qualified and matured trainees preferably supervisor level.

3. Written Instruction Method. Under this method, written or printed training materials are supplied to the trainees. The trainees go through the texts and learn the techniques, process, skill, etc. for performing jobs. These types of written materials for training are quite descriptive to answer any questions that may arise in the mind of the trainees. Such study materials are useful immediately as well as in future for reference of the trainees. Such written instructional books or booklets may contain all the instructions for operating different machines, plants, equipments, etc. and performing different jobs.

4. Institutional Training. There are specific institutions or organisations for specific type of training else cannot be imparted elsewhere. They have the permanent infrastructure, experienced and up-to-date trainers for the purpose of training. Such training courses are conducted by them regularly. So persons requiring such types of training may be sent to those specific centres or institutions to get such training. The training period may depend on the type of job to be handled. It is difficult, costly as well as in-effective to train people by organising such training independently for few people by the organisation. Such professional training institutions make research and development in conducting such training and their training is highly effective. They charge some fees for conducting such training. For example, training pilots for aeroplanes, training nurses for hospitals, etc.

Need of Performance Appraisal

- (1) It is useful to identify the employees' need for training and the area of training.
 - (2) It is needed to determine the salaries or wages if they are based on quality and quantity of works.
 - (3) Performance appraisal is needed to identify the employees eligible for promotions.
 - (4) It is useful to identify the strengths, weaknesses, merits, demerits associated with employees.
 - (5) It is an useful tool to locate the employees suitable for reward or punishment.
 - (6) It helps the management to fix targets, assign additional duties and responsibilities or reduce the work burden on employees, etc.
 - (7) It serves as a means for self-development of the employees because they are able to know their own weaknesses.
 - (8) It creates awareness in the employees because they know that their performances are being monitored. This helps to achieve motivation to put their best.
 - (9) Performance appraisal is needed to make the workers, supervisors, managers, sub-ordinates and others more vigilant because some of them shall supervise and some of them will be supervised.
 - (10) It is needed to decide the transfer of employees from one post to another or from one place to another with proper justification to promote and preserve efficiency.
 - (11) It helps the management to determine the training policy, wage policy, incentive plans, promotion policy and discipline with in industry.
 - (12) Performance appraisal is needed for effective manpower planning.
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HEALTH PROVISIONS

A number of provisions have been made in the Factories Act 1948 so far the maintenance of the health of the employers are concerned. The employers have to make adequate arrangement to preserve and promote the health of the workers working in the factory. The following provisions have been made in this Act ;

Cleanliness : (Section-11)

(1) Under this, every factory shall be kept clean and free from effluvia arising from any drain, privy or other nuisance and in particular :

- (a) accumulation of dirt and refuse shall be removed daily by sweeping or by any other effective method from the floor and benches of workrooms, and from staircases and passages, and disposed of in suitable manner;
- (b) the floor of every workroom shall be cleaned at least once every week by washing, using disinfectant, where necessary, or by some other effective method;
- (c) where the floor is likely to become wet in course of any manufacturing process to such extent as is capable of being drained, effective means of drainage shall be provided and maintained;
- (d) all inside walls and partition, all ceilings or tops of rooms and all walls, sides and tops of passages and staircases shall
 - (i) where they are painted otherwise than with washable water-paint or varnished, be repainted or re-varnished at least once in every period of five years;
 - (i-a) where they are painted with washable water-paint be repainted with atleast one cost of such paint at least once in every period of three years and washed at least once in every period of six months;
 - (ii) where they are painted or varnished or where they have smooth impervious surfaces be cleaned at least once in every period of fourteen months by such methods as may be prescribed;
 - (iii) in any other case, be kept whitewashed and the white washing or colourwashing shall be carried out at least once in every period of fourteen months;
- (dd) all doors and window frames and other or metallic framework and shutters shall be kept painted or varnished and the painting

or varnishing shall be carried out at least once every period of five years.

- (e) all dates on which the processes required by clause (d) are carried out shall be entered in the prescribed register.

The compound surrounding of every factory shall be maintained in a sanitary and clean condition, free from rubbish, filth or debris.

(2) If in view of the nature of the operations carried on in a factory or class or description of factories or any part of the factory or class or description of factories, it is not possible for the occupier to comply with all or any of the provisions of the sub-section (1), the State Government may by order exempt such factory or class or description of factories or part from any of the provisions of that sub-section and specify alternative methods for keeping the factory in a clean state.

Disposal of Wastes and Effluents : (Section-12)

- (1) Effective arrangement shall be made by every factory for the treatment of wastes and effluents due to the manufacturing process carried on therein, so as to render them innocuous, and for their disposal.
- (2) The State Government may make rules prescribing the arrangements to be made under sub-section (1) or requiring that the arrangements made in accordance with sub-section (1) shall be approved by such authority as may be prescribed.

Ventilation and Temperature : (Section-13)

- (1) Effective and suitable provision shall be made in every factory for securing and maintaining in every workroom —
- (a) adequate ventilation by the circulation of fresh air, and
- (b) such a temperature as will secure the workers therein reasonable conditions of comfort and prevent injury to health; and in particular;
- (i) walls and roofs shall be of such materials and so designed that such temperature shall not be exceeded but kept as low as practicable;
- (ii) where the nature of the work carried on in the factories involves or is likely to involve, the production of excessively high temperatures such adequate measures as are practicable shall be taken to protect the workers therefrom, by separating the process which produces such temperatures from the workroom by insulating the hot parts or by other effective means.

- (2) The State Government may prescribe a standard of adequate ventilation and reasonable temperature for and factory or class or description of factories or parts thereof and direct that a thermometer shall be provided and maintained in such place and position as may be specified.
- (3) If it appears to the State Government that in any factory or class or description of factories excessively high temperatures can be reduced by such methods as whitewashing, spraying, or insulating and screening outside walls or roofs or windows, or by raising the level of roof or by insulating the roof either by an air space and double roof or by the use of insulating roof materials, or by other methods, it may be prescribed such of these or other methods as shall be adopted in the factory.

Dust and Fume : (Section-14)

- (1) In every factory in which, by reason of the manufacturing process carried on, there is given off any dust or fume or other impurity of such a nature and to such an extent as is likely to be injurious, or offensive to the workers employed therein, or any dust in substantial quantities, effective measures shall be taken to prevent its inhalation and accumulation in any workroom, and if any exhaust appliance is necessary for this purpose, it shall be applied as near as possible to the point of origin of the dust or fume or other impurity and such points shall be enclosed so far as possible.
- (2) In any factory no stationary internal combustion engine shall be operated unless the exhaust is conducted into the open air, and no other internal combustion engine shall be operated in any room unless effective measures have been taken to prevent such accumulation of fumes therefrom as are likely to be injurious to workers employed in the room.

Artificial Humidification : (Section-15)

- (1) In respect of all factories in which the humidity of the air is artificially increased, the State Government may make rules:
 - (a) prescribing the standard of humidification ;
 - (b) regulating the methods used for artificially increasing the humidity of the air;
 - (c) directing prescribed tests for determining the humidity of the air to be correctly carried out and recorded ;
 - (d) prescribing methods to be adopted for securing adequate ventilation and cooling of the air and the workrooms.

- (2) In any factory, in which the humidity of the air is artificially increased, the water used for the purpose shall be taken from a public supply, or other source of drinking water, or shall be effectively purified before it is so used.
- (3) If it appears to an Inspector that the water used in a factory for increasing humidity which is required to be effectively purified under Section (2) is not effectively purified, he may serve on the manager of the factory an order in writing, specifying the measures which in his opinion should be adopted, and requiring them to be carried out before specified date.

Overcrowding : (Section-16)

- (1) No room in any factory should be overcrowded to an extent injurious to the health of the workers employed therein ;
- (2) Without prejudice to the generality of Sub-section (1), there shall be in every workroom of a factory in existence on the date of the commencement of this Act at least three hundred and fifty cubic feet and of a factory built after the commencement of this Act at least five hundred cubic feet of space for every worker employed therein, and for the purposes of this sub-section, no account shall be taken of any space which is more than fifteen feet above the level of the floor of the room.
- (3) If the Chief Inspector by order in writing so requires, there shall be pasted in each workroom of a factory, a notice specifying the maximum number of workers who may, in compliance with the provisions of this section, be employed in the room.
- (4) The Chief Inspector may, by order in writing exempt, subject to such conditions, if any, as he may think fit to impose, any worker from the provision of this Section if he is satisfied that compliance therewith in respect of the room is unnecessary in the interest of the health of the workers employed therein.

Lighting : (Section-17)

- (1) In every part of a factory where workers are working or passing there shall be provided and maintained sufficient and suitable lighting, natural or artificial or both.
- (2) In every factory all glazed windows and skylights used for lighting of the workroom shall be kept clean on both the inner and outer surfaces and, so far as compliance with the provision of any rules made under sub-section (3) of Section (13) will allow, free from obstruction.
- (3) In every factory effective provisions shall, so far as is practicable, be made for the prevention of –

- (a) glare, either directly from a source of light or by reflection from a smooth or polished surface;
 - (b) the formation of shadows to such an extent as to cause eye strain or the risk of an accident to any worker.
- (4) The State Government may prescribe standards of sufficient and suitable lighting for factories or for any class or description of factories or for any manufacturing process.

SAFETY PROVISIONS

Fencing of Machinery : (Section-21)

(1) In every factory the following, namely —

- (i) every moving part of a prime mover and every fly wheel connected to a prime mover, whether the prime mover or fly wheel is in the engine house or not ;
- (ii) the headrace and tailrace of every water-wheel and water-turbine;
- (iii) any part of a stock-bar which projects beyond the head stock of a lathe; and
- (iv) unless they are in such position or of such construction as to be safe to every person employed in the factory as they would be if they were securely fenced, the following, namely, —
 - (a) every part of an electric generator, motor, or rotary convertor,
 - (b) every part of transmission machinery ; and
 - (c) every dangerous part of any other machinery ;

shall be securely fenced by safeguards of substantial construction which shall be constantly maintained and kept in position while the parts of machinery they are fencing are in motion or in use :

Provided that for the purpose of determining whether any part of machinery is in such position or is of such construction as to be safe as aforesaid, account shall not be taken of any occasion when

- (i) it is necessary to make an examination of any part of the machinery aforesaid while it is in motion or as a result of such examination, to carry out lubrication or other adjusting operation while the machinery is in motion being an examination or operation which it is necessary to be carried out while that part of the machine is in motion, or
- (ii) in any case of any part of a transmission machinery used in such process as may be prescribed, it is necessary to make an examination of such part of the machinery while it is in motion or, as a result of such lubrication or other adjusting operation while the machinery is in motion,

and such examination or operation is made or carried out in accordance with the provisions of sub-section (1) of section (22).

2. The State Government may by rules prescribe such further precaution as it may consider necessary in respect of any particular machinery or part thereof, or exempt, subject to such condition as may be prescribed for securing the safety of the workers, any particular machinery or part thereof from the provisions of this section.

Work on or Near Machinery in Motion : (Section-22)

- (1) Where in any factory it becomes necessary to examine any part of machinery referred to section (21), while the machinery is in motion, or, as a result of such examination, to carry out –
- (a) in a case referred to in clause (i) of the proviso to sub-section (1) of section 21, lubrication or other adjusting operation; or
 - (b) in a case referred to in clause (ii) of the proviso aforesaid, any mounting or shipping of belts or lubrication or other adjusting operation,

while the machinery is in motion, such examination or operation shall be made or carried out only by specially trained adult male worker wearing tight fitting clothing (which shall be of the occupier) whose name has been recorded in the register prescribed in this behalf and who has been furnished with a certificate of his appointment, and while he is so engaged –

- (a) Such worker shall not handle a belt at a moving pulley unless–
 - (i) the belt is not more than fifteen centimetres in width;
 - (ii) the pulley is normally for the purpose of drive and not merely a fly wheel or balance wheel (in which case a belt is not permissible);
 - (iii) the belt joint in is either laced or flush with the belt ;
 - (iv) the belt, including the joint and the pulley rim, are in good repair;
 - (v) there is a reasonable clearance between the pulley and any fixed plant or structure;
 - (vi) secure foothold and, where necessary, secure handhold, are provided for the operator; and
 - (vii) any ladder in use for carrying out an examination or operation aforesaid in securely fixed or laced or is firmly held by a second person.
 - (b) without prejudice to any other provision of this Act relating to with the fencing of machinery, every set of screw, bolt, and key on any revolving shaft, spindle, wheel or pinion, and all spur worm and other toothed or friction gearing in motion with which such worker would otherwise be liable to come out into contact, shall be securely fenced to prevent such contact.
- (2) No workman or young person shall be allowed to clean, lubricate or adjust any part of a prime mover or of any transmission

machinery while the prime mover or transmission machinery is in motion, or to clean, lubricate or adjust any part of any machine if the cleaning, lubrication or adjustment thereof would expose the workman or young person to risk of injury from any moving part either of that machine or of any adjustment machinery.

- (3) The State Government may, by notification in the official gazette prohibit in any specified factory or class or description of factories the cleaning, lubricating or adjusting by any person of specified parts of machinery when those parts are in motion.

**Employment of Young Persons on Dangerous Machines:
(Section-23)**

- (1) No young person shall work at any machine to which this section applies, unless he has been fully instructed as to the dangers arising in connection with the machine and the precautions to be observed and –
- (a) has received sufficient training in work at the machine, or
 - (b) is under adequate supervision by a person who has a thorough knowledge and experience of the machine.
- (2) sub-section (1) shall apply to such machines as may be prescribed by the State Government, being machines which in its opinion are of such a dangerous character that young persons ought not to work at them unless the foregoing requirements are complied with.

Striking Gear and Devices for Cutting off Power : (Section-24)

- (1) In every factory –
- (a) suitable striking gear or other efficient mechanical appliance shall be provided and maintained and used to move driving belts to and from fast and loose pulleys which form part of the transmission machinery, and such gear and appliances shall be so constructed, placed and maintained so as to prevent the belt creeping back on to the first pulley ;
 - (b) driving belts when not in use shall not be allowed to rest or ride upon shifting in motion.
- (2) In every factory suitable devices for cutting off power in emergencies from running machinery shall be provided and maintained in every workroom;
- Provided that in respect of factories in operation before the commencement of this Act, the provisions of this sub-section

WELFARE PROVISIONS

Washing Facilities : (Section-42)

(1) In every factory—

- (a) adequate and suitable facilities for washing shall be provided and maintained for the use of the workers therein;
- (b) separate and adequately screened facilities shall be provided for the use of male and female workers;
- (c) such facilities shall be conveniently accessible and shall be kept clean.

(2) The State Government may, in respect of any factory or class or description of factories or of any manufacturing process, prescribe standards of adequate and suitable facilities for washing.

Facilities for Storing and Drying Clothes : (Section-43)

The State Government may, in respect of any factory or class or description of factories, make rules requiring the provision therein of suitable places for keeping clothing not worn during working hours and for the drying of wet clothing.

Facilities for Sitting : (Section-44)

- (1) In every factory suitable arrangement for sitting shall be provided and maintained for all workers obliged to work in a standing position, in order that they may take advantage of any opportunities for rest which may occur in the course of their work.
- (2) If, in the opinion of the Chief Inspector, the workers in any factory engaged in a particular manufacturing process or working in a particular room are able to do their work efficiently in a sitting position, he may, by order in writing, require the occupier of the factory to provide before a specified date such seating arrangements as may be practicable for all workers so engaged or working.
- (3) The State Government may, by notification in the Official Gazette, declare that the provisions of the sub-section (1) shall not apply to any specified factory or class or description of factories or to any specified manufacturing process.

First-aid Appliances : (Section-45)

- (1) There shall in every factory be provided and maintained, so as to be readily accessible during all working hours first-aid boxes or cupboards equipped with the prescribed contents, and the number of such boxes or cupboards to be provided and maintained shall not be less than one for every one hundred and fifty workers ordinarily employed at any one time in the factory.
- (2) Nothing except the prescribed contents shall be kept in the first-aid box or cupboard.
- (3) Each first-aid box or cupboard shall be kept in the charge of a separate responsible person who holds a certificate in first-aid treatment recognised by the State Government and who shall always be readily available during the working hours of the factory.
- (4) In every factory wherein more than five hundred workers are ordinarily employed, there shall be provided and maintained an ambulance room of the prescribed size, containing the prescribed equipment and in the charge of such medical and nursing staff as may be prescribed and those facilities shall always be made readily available during the working hours of the factory.

Canteens : (Section-46)

- (1) The State Government may make rules requiring that in any specified factory wherein more than two hundred and fifty

workers are ordinarily employed, a canteen or canteens shall be provided and maintained by the occupier for the use of workers.

- (2) Without prejudice to the generality of the foregoing power, such rules may provide for —
- (a) the date by which such canteen shall be provided;
 - (b) the standards in respect of construction, accommodation, furniture and other equipment of the canteen;
 - (c) the foodstuffs to be served therein and the charges which may be made therefor;
 - (d) the constitution of a managing committee for the canteen and representation of the workers in the management of the canteen;
 - (dd) the items of expenditure in the running of the canteen which are not to be taken into account in fixing the cost of foodstuffs and which shall be borne by the employer;
 - (e) the delegation to the Chief Inspector, subject to such condition as may be prescribed, of the power to make rules under clause (c).

Shelters, Rest-rooms and Lunch-rooms : (Section-47)

- (1) In every factory wherein more than one hundred and fifty workers are ordinarily employed, adequate and suitable shelters or rest-room and a suitable lunch room, with provision for drinking water where workers can eat meals brought by them, shall be provided and maintained for the use of the workers;

Provided that any canteen maintained in accordance with the provisions of section (45) shall be regarded as part of the requirements of this sub-section;

Provided further that where a lunch room exists no worker shall eat any food in the work room.

- (2) The shelter or rest rooms or lunch rooms to be provided under sub-section (1) shall be sufficiently lighted and ventilated and shall be maintained in a cool and clear condition.
- (3) The State Government may—
- (a) prescribe the standard in respect of construction, accommodation, furniture and other equipment of shelter or rest rooms and lunch rooms to be provided under this section;
 - (b) by notification in the Official Gazette, exempt any factory or class or description of factories from the requirement of this section.

Creches : (Section-48)

- (1) In every factory wherein more than thirty women workers are ordinarily employed, there shall be provided and maintained a suitable room or rooms for the use of children under the age of six years of such women.
- (2) Such rooms shall provide adequate accommodations, shall be adequately lighted and ventilated, shall be maintained in a clean and sanitary condition and shall be under the charge of women trained in the care of children and infants.
- (3) The State Government may make rules—
 - (a) prescribing the location and the standards in respect of construction, accommodation, furniture and other equipments of rooms to be provided under this section;
 - (b) requiring the provision in factories to which the section applies of additional facilities for the care of children belonging to women workers, including suitable provision of facilities for washing and changing their clothing;
 - (c) requiring the provision in any factory of free milk or refreshment or both for such children;
 - (d) requiring that facilities shall be given in any factory for the mothers of such children to feed them at the necessary intervals.

Welfare Officers : (Section-49)

- (1) In every factory wherein five hundred or more workers are ordinarily employed, the occupier shall employ in the factory such number of welfare officers as may be prescribed.
- (2) The State Government may prescribe the duties, qualifications and conditions of service of officers employed under sub-section (1).

Power to Make Rules to Supplement This Chapter : (Section-50)

- (1) The State Government may make rules—
 - (a) exempting, subject to compliance with such alternative arrangements for the welfare of the workers as may be prescribed, any factory or class or description of factories from compliance with any of the provisions of this chapter;
 - (b) requiring in any factory or class or description of factories that the representatives of the workers employed in the factory shall be associated with the management of the welfare arrangements of the workers.

save in such circumstances as may be prescribed

Employment of Women : (Section-61)

(1) The provision of this chapter shall, in their application to women in factories, be supplemented by the following further restrictions, namely—

(a) no exemption from the provisions of Section 54 may be granted in respect of any women ; (No Women can be allowed to work for more than nine hours a day.)

(b) no women shall be required or allowed to work in any factory except between the hours of 7 A.M. and 7 P.M.;
provided that the State Government may, by notification in the Official Gazette in respect of any factory or group or class or description of factories vary the limits laid down in clause (b) but so that no such variation shall authorise the employment of any women between the hours of 10 P.M. and 5 A.M.;

(c) there shall be no change of shifts except after a weekly holiday or any other holiday.

(2) The State Government may make rules providing for the exemption from the restrictions set out in Sub-Section (1), to such extent and subject to such conditions as it may prescribe, of women working in fish-curing or fish canning factories where

WORKERS, THE MANNER IN WHICH... and the
period for which it shall be preserved.

Hours of Work to Correspond with Notice Under Section 72 and Register Under Section 73 : (Section-74)

No child shall be employed in any factory otherwise than in accordance with the notice of periods of work for children displayed in the factory and the entries made beforehand against his name in the register of child workers of the factory.

Power to Require Medical Examination : (Section-75)

Where the Inspector is of the opinion :

- (a) that any person working in a factory with a certificate of fitness is no longer fit to work in the capacity stated therein,

He may serve on the manager of the factory a notice requiring that such person or young person, as the case may be, shall be examined by a Certifying Surgeon, and such person or young person shall not, if the Inspector so directs, be employed, or permitted to work, in any factory until he has been so examined and has been granted a certificate of fitness or a fresh certificate of fitness, as the case may be, under Section 69, or has been certified by the Certifying Surgeon examining him not to be a young person.

Power to Make Rules : (Section-76)

The State Government may make rules—

- (a) prescribing the forms of certificate of fitness to be granted under Section 69, providing for the grant of duplicates in the event of loss of the original certificate, and fixing the fees which may be charged for such certificates, and renewals thereof and such duplicates ;
- (b) prescribing the physical standards to be attained by children and adolescents working in factories;
- (c) regulating the procedure of Certifying Surgeons under this chapter ;
- (d) specifying other duties which Certifying Surgeons may be required to perform in connection with the employment of

young persons in factories, and fixing the fees which may be charged for such duties and the persons by whom they shall be payable.

Annual Leave with Wages : (Section-79)

(1) Every worker who has worked for a period of two hundred fifty days or more in a factory during a calendar year shall be allowed during the subsequent calendar year, leave with wages for a number of days calculated at the rate of—

(i) if one adult, one day for every twenty days of work performed by him during the previous calendar year;

(ii) if a child, one day for every fifteen days of work performed by him during the previous calendar year.

(a) any days of lay-off, by agreement or contract or as permissible under the standing orders ;

(b) in the case of female workers, maternity leave for any number of days not exceeding twelve weeks; and

(c) the leave earned in the year prior to that in which the leave is enjoyed;

shall be deemed to be days on which the worker has worked in a factory for the purpose of computation of the period of two hundred fifty days or more, but he shall not earn leave for these days.

Explanation : The leave admissible under this Sub-section shall be exclusive of all holidays whether occurring during or at either of the period of leave.

(2) A worker whose service commences otherwise than on the first day of January shall be entitled to leave with wages at the rate laid down in clause (i) or, as the case may be clause (ii) of Sub-section (1) if he has worked for two-thirds of the total number of days in the remainder of the calendar year.

(3) If a worker is discharged or dismissed from service or quits his employment or is superannuated or dies while in service, during the course of the calendar year, he or his heir or nominee, as the case may be, shall be entitled to wages in lieu of the quantum of leave he was entitled immediately before his discharge, dismissal, quitting of employment, superannuation or death calculated at the rates specified in Sub-Section (1) or Sub-Section (2) making him eligible to avail of such leave, and such payment shall be made—

(i) where the worker is discharged or dismissed or quits employment, before the expiry of the second working

(b) such persons as may be prescribed.

Factory Inspectors : (Section-8)

The State Government may by notification in the Official Gazette, appoint such persons as possess the prescribed qualification to be inspectors for the purpose of this Act and may assign to them such local limits as it may think fit.

Powers of Factory Inspector : (Section-9)

Subject to any rules made in this behalf, an Inspector may, within the local limits for which he is appointed ;

- (a) enter, with such assistants being persons in the service of the Government, or any local or other public authority, as he thinks fit, any place which is used, or which he has reason to believe is used as a factory;
- (b) make examination of the premises, plant, machinery, articles or substances;
- (c) inquire into any accident or dangerous occurrence, whether resulting in bodily injury, disability or not, and take on the spot or otherwise statements or any person he may consider necessary for such inquiry;
- (d) require the production of any prescribed register or any other document relating to the factory;
- (e) Seize, or take copies of, any register, record or other document or any portion thereof, as he may consider necessary in respect of any offence under this Act which he has reason to believe has been committed;
- (f) direct the occupier that any premises or any part thereof, or anything lying there in, shall be left undisturbed so long as is necessary for the purpose of any examination under clause (b);
- (g) make photographs, and measurement, and make such recordings as he considers necessary for the purpose of any examination under clause (b) taking with him any necessary instrument or equipment;

- (h) in case of any article or substance found in the premises being an article or substance which appears to him as having caused or is likely to cause danger to the health or safety of the workers, direct it to be dismantled or subject it to any process of test (but not so as to damage or destroy it unless the same is necessary for carrying out the purposes of this Act). The inspector may take possession of any such article or substance or a part there of and detain it for so long as necessary for such examination;
- (i) exercise such other powers as may be prescribed for carrying out the purposes of this Act.

Provided that no person shall be compelled under this section to answer any question or give any evidence tending to incriminate himself.