

NCERT Solutions Class 12
Business Studies Principles and Functions of Management
Chapter 2 Principles of Management Class 12

Multiple choice questions

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Question 1 : Principles of management are NOT

- (a) **Universal**
- (b) **Flexible**
- (c) **Absolute**
- (d) **Behavioural**

Solution :

Management principles are relative rather than absolute. Therefore, these should be applied according to the need of the organisation and demands of the situation.

According to Fayol, "principles of management are flexible, not absolute but must be utilized in the light of changing and special conditions.

There is nothing rigid or absolute in management affairs, it is all a question of proportion therefore, principles are flexible and capable of adaption to every need.

It is a matter of knowing how to make use of them, which is a difficult art requiring intelligence, experience and proportion". Seldom does one have to apply the same principles twice in identical situations; allowance must be made for different changing conditions. Management principles should not be applied blindly in the same way to all problems.

Question 2 : How are principles of management formed?

- (a) **In a laboratory**
- (b) **By experiences of managers**
- (c) **By experiences of customers**
- (d) **By propagation of social scientists**

Solution:

The principles of management are formed by experience and collective wisdom of managers as well as experimentation. For example, it is a matter of common experience that discipline is indispensable for accomplishing any purpose. This principle finds mention in management theory. On the other hand, in order to remedy the problem of fatigue of workers in the factory, an experiment may be conducted to see the effect of improvement of physical conditions to reduce stress.

Question 3 : The principles of management are significant because of

- (a) **Increase in efficiency**
- (b) **Initiative**
- (c) **Optimum utilisation of resources**
- (d) **Adaption to changing technology**

Solution :

Resources both human and material available with the company are limited. They have to be put to optimum use. By optimum use we mean that the resources should be put to use in such a manner that they should give maximum benefit with minimum cost. Principles equip the managers to foresee the cause and effect relationships of their decisions and actions. As such the wastages associated with a trial-and-error approach can be overcome. Effective administration necessitates impersonalisation of managerial conduct so that managerial power is used with due discretion. Principles of management limit the boundary of managerial discretion so that their decisions may be free from personal prejudices and biases. Thus, principles of management are significant because of optimum utilisation of resources. Increase in efficiency, initiative and adaptation to changing technology arrives at later stages, once the resources are fully utilised.

Question 4 : Henry Fayol was a

- (a) **Social Scientist**
- (b) **Mining Engineer**
- (c) **Accountant**
- (d) **Production engineer**

Solution :

Henry Fayol :

1. Life Time: 1841 TO 1925
2. Profession: Mining Engineer and Management Theorist (French national)
3. Education: Graduated from Mining Academy at St. Etienne. in 1880.
4. Positions Held: Founded the mining company 'Compagnie de Commentry-Fourchambeau-Decazeville' and became its Managing Director in 1888 and remained till 1918.
5. Writings: Administration industrielle et générale. It was published in English as General and Industrial Management in 1949 and is widely considered a foundational work in

classical management theory.

6. Contributions: Mainly 14 Management Principles, which are referred to as administrative in nature in that they have Top-Down approach concerning top management and other manager's conduct.

Question 5 : Which of the following statement best describes the principle of 'Division of Work'

- (a) **Work should be divided into small tasks**
- (b) **Labour should be divided**
- (c) **Resources should be divided among jobs**
- (d) **It leads to specialisation**

Solution :

According to the principle of 'Division of Work', the work should be divided into small jobs.

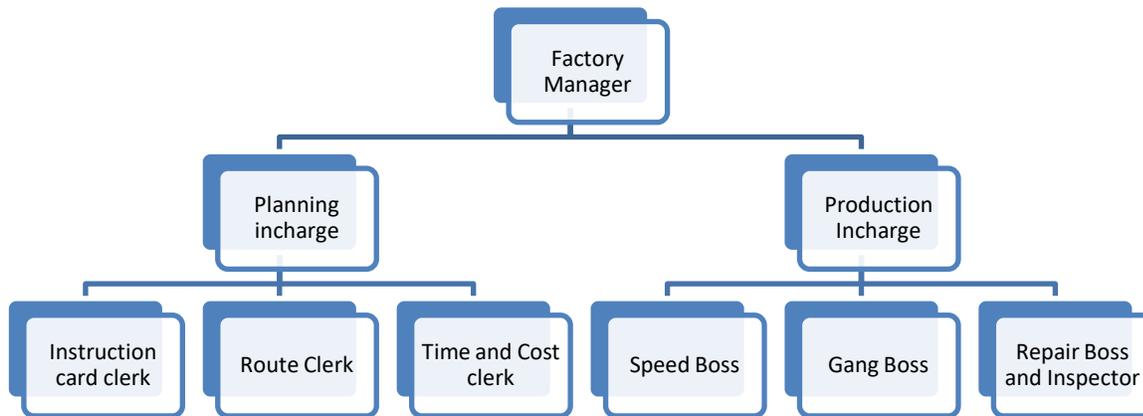
According to Fayol, "The intent of division of work is to produce more and better work for the same effort. Specialisation is the most efficient way to use human effort."

In business work can be performed more efficiently if it is divided into specialised tasks; each performed by a specialist or trained employee. This results in efficient and effective output. Thus, in a company we have separate departments for finance, marketing, production and human resource development etc.. Fayol applies this principle of division of work to all kinds of work – technical as well as managerial.

Question 6 : 'She/he keeps machines, materials, tools, etc., ready for operations by concerned workers'. Whose work is described by this sentence under functional foremanship

- (a) **Instruction Card Clerk**
- (b) **Repair Boss**
- (c) **Gang Boss**
- (d) **Route Clerk**

Solution :



The work of Gang Boss is being described in the given sentence. Gang boss is assigned the task of keeping the machines and tools ready for operations. That is, he has to take care of the materials which are to be used by the working people. On the other hand, repair boss ensures that these machines are in proper working condition. Route clerk is there to watch over the route of production and instruction card clerk assigns the duties of the workers.

Question 7 : Which of the following is NOT a Principle of management given by Taylor?

- (a) Science, not rule of Thumb
- (b) Functional Foremanship
- (c) Maximum not restricted output
- (d) Harmony not discord

Solution :

Among the options given above, Functional Foremanship is not a principle of management rather it is a technique of scientific management as given by Taylor. It comprises of the methods or steps to be taken to achieve a desired goal. On the other hand, the other three are principles of management that acts as guidelines for decision making in the actual practice of the techniques.

Question 8 : Management should find 'One best way' to perform a task. Which technique of Scientific management is defined in this sentence?

- (a) Time Study
- (b) Motion Study
- (c) Fatigue Study
- (d) Method Study

Solution:

The technique that is being described in the given sentence is 'Method Study'. According to the

'Method Study' there is always a 'one best way' to complete any task. Every task can be performed via best method to gain efficiency. The basic purpose of this study is to reduce the costs to its minimal and increase the productivity to its maximum. Time study, Motion study and Fatigue study aims at standardising the time limits, eliminating the unwanted actions and deciding the break limits, respectively.

Question 9 : Which of the following statements best describes 'Mental Revolution'?

- (a) **It implies change of attitude**
- (b) **The management and workers should not play the game of one upmanship.**
- (c) **Both management and workers require each other.**
- (d) **Workers should be paid more wages.**

Solution :

'Mental Revolution', a term given by Taylor implied that the management and workers should change their attitude and thinking towards harmony. Management should take care of the needs and suggestions given by the workers and workers on the other hand, should work to their best capability. This will build a harmonious working environment in the organisation.

Question 10 : Which of the following statements is FALSE about Taylor and Fayol?

- (a) **Fayol was a mining engineer whereas Taylor was a mechanical engineer**
- (b) **Fayol's principles are applicable in specialised situations whereas Taylor's principles have universal application.**
- (c) **Fayol's principles were formed through personal experience whereas Taylor's principles were formed through experimentation.**
- (d) **Fayol's principles are applicable at the top level of management whereas Taylor's principles are applicable at the shop floor.**

Solution :

The false statement is 'Fayol's principles are applicable in specialised situations whereas Taylor's principles have universal application'. The correct statement in place of this is, 'Fayol's principles are universally applicable whereas Taylor's principles are applicable only in specialised situation.'

Short answers Type

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Question 1 : How is the principle of 'Unity of Command' useful to management? Explain briefly.

Solution :

According to Fayol there should be one and only one boss for every individual employee. If an employee gets orders from two superiors at the same time the principle of unity of command is violated. The principle of unity of command states that each participant in a formal organisation should receive orders from and be responsible to only one superior. Fayol gave a lot of importance to this principle. He felt that if this principle is violated "authority is undermined, discipline is in jeopardy, order disturbed and stability threatened". The principle resembles

military organisation. Dual subordination should be avoided. This is to prevent confusion regarding tasks to be done. Suppose a sales person is asked to clinch a deal with a buyer and is allowed to give 10% discount by the marketing manager. But finance department tells her/him not to offer more than 5% discount. Now there is no unity of command. This can be avoided if there is coordination between various departments.

Question 2 : Define Scientific Management. State any three of its principles.

Solution :

The term 'Scientific management' was developed by Frederick Taylor (1856-1915) in 1911. It refers to the classical outlook of management which focussed on devising the best ways of doing the work and thereby increasing the effectiveness and efficiency of work. Scientific management implies working according to standardised techniques and tools and with the help of specialised personnel so as to improve the quantity as well as the quality of the product and the same time reducing the costs. Scientific management is also known as Taylorism.

The Following are three principles of scientific management.

i. *Harmony, Not Discord:* According to this principle, the managers and the workers should maintain a harmonious work environment. They should realise that they are dependent on each other. Only if they work in amity, will they be able to perform better. Taylor emphasised on complete mental revolution. That is, the workers should change their attitude and each one should realise others importance. Management should take care of the needs of the workers and workers on the other hand should work to their best efficiency. Both should work in harmony towards the common goals of the organisation.

ii. *Science, Not Rule of Thumb:* According to Taylor, instead of rule of thumb scientific management practices should be followed. Under the rule of thumb, each manger handles a situation as and when they arise. They used the trial and error method to find solutions to a problem. Taylor proposed that instead of this management practices should be scientific. He suggested that a study of various traditional methods should be done and the best method/solution among them should be adopted and followed by all the managers in the organisation. Such a scientific management greatly reduces the costs and improves efficiency.

iii. *Personnel Development:* Overall efficiency of the organisation depends on the individual competencies of the employees. Scientific management aimed at improving the working capabilities of the employees to their maximum level. It focused on the training and development of the labourers to raise their productivity.

Question 3 : If an organisation does not provide the right place for physical and human resources in an organisation, which principle is violated? What are the consequences of it?

solution :

In the stated situation, the Principle of Order is violated. As per the Principle of Order, there should be right arrangement of things. The principle of order states that 'A place for everything (everyone) and everything (everyone) in its (her/his) place'. Essentially it means orderliness. If there is a fixed place for everything and it is present there, then there will be no hindrance in the activities of business/ factory. This will lead to increased productivity and efficiency.

If this principle is violated, then it leads to chaos and delay in work. For instance, if the files are not kept in a certain order, then it will lead to difficulty in locating a file when required. This

will further lead to delay in the work.

Question 4: Explain any four points regarding significance of Principles of Management.

Solution:

Principles of management play an important role in managerial practices. They guide the managers in taking actions and decisions. The following points highlight the significance of Principles of Management

- 1. Providing Managers with useful insights into Reality:** Principles of Management are based on years of experimentation and experience. Thus, these principles guide the managers, when they face the real-world problems. Managers can use them in different situations to solve the recurring problems.
- 2. Scientific Decisions:** Decisions regarding management should be taken carefully. They should be based on reasons and proofs rather than beliefs and ignorance. As principles of management were developed from real life problems so, they stand the test of logic and reasoning. Thus, principles of management help the managers in taking logical decisions that are free from personal bias.
- 3. Management Training, Education and Research:** These principles form the basic roots of management education. Without them management as a discipline could not have been developed. That is, they form an important part of management curriculum. In addition, they also form the basis of further research on management techniques and methods.
- 4. Optimal use of Resources:** Principles of management help in the optimum utilisation of the available resources. With principles of management the exact cause and effect relationship of the decisions of the managers can be predicted. Thereby, the wastages of resources that may be associated with the hit and trail method can be avoided.

Thus, by following the principles of management, best possible usage of resources becomes possible such that maximum benefit can be derived with minimum possible cost.

Question 5 : Explain the principle of 'Scalar Chain' and gang plank.

Solution :

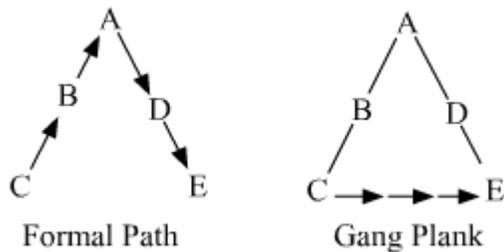
An organisation consists of superiors and subordinates. The formal lines of authority from highest to lowest ranks are known as scalar chain. According to Fayol, "Organisations should have a chain of authority and communication that runs from top to bottom and should be followed by managers and the subordinates."

Scalar Chain refers to a pre-defined, formal path of authority and communication in the order of highest to the lowest. For example- if A is the CEO of an organisation and he has two paths of authorities under him. One, A-B-C and the other A-D-E. Everybody in the organisation follows this chain of authority for communication. For example, If C wants to contact with E then he will have to follow this formal path, as $C \rightarrow B \rightarrow A \rightarrow D \rightarrow E$. That is, C has to first contact the higher authorities ($C \rightarrow B \rightarrow A$) over him who then transverse the communication to E ($A \rightarrow D \rightarrow E$).

However, in case of emergency C may directly contact E through 'Gang Plank'. Gang plank is a shorter emergency route through which the workers lower in the authority chain can directly contact the persons of higher authority or those working in other scalar chains.

In practice you find that a worker cannot directly contact the CEO of the company. If at all she/he has to,

then all the formal levels i.e., foreman, superintendent, manager, director etc have to know about the matter. However, in an emergency it can be possible that a worker can contact CEO directly.



Long answers Type

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Question 1 : Explain the Principles of Scientific management given by Taylor.

Solution :

Scientific management implies knowing exactly what is to be done and devising the best ways of doing it. This term was given by Frederick Taylor (1856-1915) in 1911. It suggests that work should be done according to standardised techniques and tools and with the help of specialised personnel so as to improve the quantity as well as the quality of the product and the same time reducing the costs. That is, scientific management improves the effectiveness and efficiency of work.

The following are the principles of scientific management.

2. **Science, not a rule of thumb:** Before Taylor developed the Principles of Management, Rule of Thumb was a widely used concept. Under rule of thumb, each manager handled a situation or problem as and when they arose using the trial and error method. Taylor believed that there was only one best method to maximise efficiency. This method can be developed through study and analysis. The method so developed should substitute 'Rule of Thumb' throughout the organisation. Scientific method involved investigation of traditional methods through work-study, unifying the best practices and developing a standard method, which would be followed throughout the organisation. According to Taylor, even a small production activity like loading pigs of iron into boxcars can be scientifically planned and managed. This can result in tremendous saving of human energy as well as wastage of time and materials. The more sophisticated the processes, greater would be the savings.
3. **Harmony, not Discord:** Factory system of production implied that managers served as a link between the owners and the workers. Since as managers they had the mandate to 'get work done' from the workers, it should not be difficult for you to appreciate that there always existed the possibility of a kind of class-conflict, the managers versus workers. Taylor recognised that this conflict helped none, the workers, the managers or the factory owners. He emphasised that there should be complete harmony between the management and workers. Both should realise that each one is important. Management should share the gains of the company, if any, with the workers. At the same time workers should work hard and be willing to embrace change for the good of the company. Japanese work culture is a classic example of such a situation.
4. **Cooperation, not Individualism:** This principle emphasised cooperation among the managers

and workers over individualism. This principle was an elongation of the principle of 'Harmony, not discord'. According to it, the workers and the manager should work with mutual understanding of each other. For this, management should not close its ears to any constructive suggestions made by the employees. They should be rewarded for their suggestions which results in substantial reduction in costs. They should be part of management and, if any important decisions are taken, workers should be taken into confidence. At the same time workers should desist from going on strike and making unreasonable demands on the management. In fact, when there will be open communication system and goodwill there will be no need for even a trade union.

5. **Personnel Development:** Any organisation should focus on the development of its workers along with the company's growth. This is because if the workers will have higher proficiency, then they will be able to increase their contribution to the organisation's development. They should introduce ways and incentives to build up their competitiveness. Efforts towards increasing the efficiency should begin at the very first step i.e. while hiring the workers. Employees should be recruited in a scientific manner. They should be assigned works according to their mental/physical qualities. For increasing the efficiency, the workers should be given a proper training.

Question 2 : Explain the following Principles of management given by Fayol with examples:

- (a) **Unity of direction**
- (b) **Equity**
- (c) **Espirit de corps**
- (d) **Order**
- (e) **Centralisation and decentralisation**
- (f) **Initiative**

Solution :

- (a) **Unity of Direction-** According to this principle, each unit of the organisation should work towards a common objective. According to it, units having same goals should have a single head and plan. This principle helps in eliminating the overlapping of work. For example, if a company is manufacturing motorcycles as well as cars then it should have two separate divisions for both of them. Each division should have its own incharge, plans and execution resources. On no account should the working of two divisions overlap.
- (b) **Equity-** This principle focuses on treating each employee fairly equally. That is, it states that each employee should be equal in the eyes of the manager. Although this principle calls for kindness in the behaviour of the manager, however sometimes force can also be used. Lazy personnel should be dealt with sternly to send the message that everyone is equal in the eyes of the management. In addition, the workers should be regarded as equal grounds of religion, language, caste, etc. This helps in building an amiable environment. For example: India-born CEO's such as Rajat Gupta who heads multinational like Mckinsey Inc.
- (c) **Espirit de Corps-** This principle recommends that employees should work in unity with each other. They should work as a team. In other words, team spirit should be promoted by the manager. Each employee should have a sense of belongingness. This proves useful especially in large organisations where without team work, achievement of objectives would become difficult. Team spirit increases coordination and mutual understanding among the employees and thereby

improves efficiency.

(d) **Order**-According to Fayol, “People and materials must be in suitable places at appropriate time for maximum efficiency.” The principle of order states that ‘A place for everything (everyone) and everything (everyone) in its (her/his) place’. Essentially it means orderliness. If there is a fixed place for everything and it is present there, then there will be no hindrance in the activities of business/ factory. This will lead to increased productivity and efficiency.

(e) **Centralisation and Decentralisation**- Centralisation refers to the consolidation of power and authority to one or only few hands. Here, the decision-making power gets reserved to the centre point of an organisation. On the other hand, decentralisation refers to the delegation of authority to more than one level. According to Fayol, the involvement of the employees with the higher authority should be balanced by decentralising the authority to the managers. For example, if the CEO of a company is responsible for decision making for the entire organisation then, this is centralisation of power. On the other hand, if the decision-making power is delegated to managers at the middle and lower level then, this will be called decentralisation.

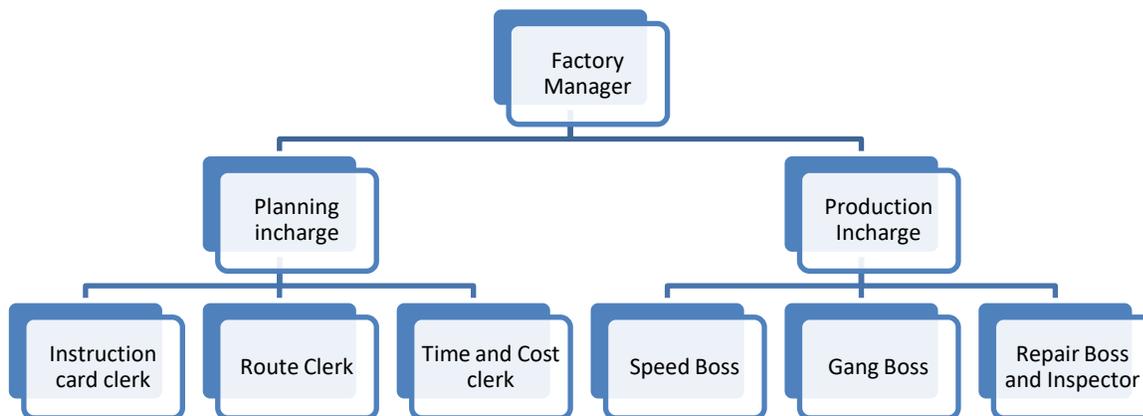
(f) **Initiative**- According to this principle, workers should be given enough motivation and incentive to work. They should be inspired to come up with suggestions for regarding the work. Although initiatives should be encouraged, but they should be in line with the practices and rules of the organisation. For example, the managers can ask the workers for their inputs over how to increase efficiency. Also, good suggestions can be rewarded.

Question 3 : Explain the technique of 'Functional Foremanship' and the concept of 'Mental Revolution' as enunciated by Taylor.

Solution :

Functional Foremanship

A foreman refers to a person who is in charge of the operational level workers. Taylor suggested that to increase the efficiency, performance of the foreman should be improved. That is, Taylor focussed on the importance of the foreman in an organisation. Taylor observed and identified few qualities, such as intelligence, tact, judgement, etc., that a foreman should have. He found that no single person can have all the required qualities. Thus, he suggested that instead of a single person, there should be eight persons through which the functions of a foreman should be accomplished. This technique was given the name Functional Foremanship. According to this, the planning and the production functions should be separated. That is, under the manager, there would be one planning incharge and one production incharge. Each incharge would have four personnel under him/her.



The following are the four persons that worked under the *planning incharge*.

- i. *Instruction Card Clerk*- To give instructions to the workers.
- ii. *Route Clerk*- To show the route of production.
- iii. *Time and Cost Clerk*- To take care about the time and costs.
- iv. *Disciplinarian*- To ensure that discipline is being maintained.

The following are the four persons that worked under the *production incharge*.

- i. *Speed Boss*- To ensure timely completion of tasks
- ii. *Gang Boss*- To keep the machines and tools ready for the workers.
- iii. *Repair Boss*- To ensure proper working of the machines.
- iv. *Inspector*- To control the quality of work done.

Functional foremanship is an extension of the principle of division of work and specialisation to the shop floor. Each worker will have to take orders from these eight foremen in the related process or function of production. Foremen should have intelligence, education, tact, grit, judgment, special knowledge, manual dexterity, and energy, honesty and good health. Since all these qualities could not be found in a single person so Taylor proposed eight specialists. Each specialist is to be assigned work according to her/his qualities. For example, those with technical mastery, intelligence and grit may be given planning work. Those with energy and good health may be assigned execution work

Mental Revolution

Mental Revolution implies changing the attitude of the workers and the managers. Mental revolution aimed at improving the thinking of both, to create a better working environment. The workers and the manager should change their attitude and each one should realise others importance. Both should work towards the common goals of the organisation. Management should take care of the needs of the workers and share the benefits with them. On the other hand, workers should put in their best efforts. Thus, the concept of Mental Revolution enunciated on cooperation and mutual trust between the workers and the managers.

Question 4 : Discuss the following techniques of Scientific Work Study:

- (a) **Time Study**
- (b) **Motion Study**
- (c) **Fatigue Study**
- (d) **Method Study**
- (e) **Simplification and standardisation of work.**

Solution :

(a) **Time Study**- In this technique Taylor emphasised on setting a standard time limit for completing any particular job. Time measuring devices are used for each element of task. The standard time is fixed for the whole of the task by taking several readings. The method of time study will depend upon volume and frequency of the task, the cycle time of the operation and time measurement costs. The objective of time study is to determine the number of workers to be employed; frame suitable incentive schemes and determine labour costs. For example, if, on the basis of observations it is determined that one person can finish making 1 shirt in two hours then, in a working day of 8 hours, each worker should make 4 shirts.

(b) **Motion Study**- As the name suggests, motion study refers to the study of motion (movements) involved while undertaking a task. This technique aims at removing the unwanted actions/motions so that the work can be completed in a lesser time. Taylor along with his associate Frank Gailberth observed the motions of a worker and categorised them as productive, incidental and unproductive. They demonstrated that by eliminating the unproductive movements productivity can be increased. For example, in brick layering they demonstrated that productivity increased by nearly 4 times by reducing the motions from 18 to 5.

(c) **Fatigue Study**- This technique is regarding requirement of rest or break during the work. If a worker works continuously physical and mental fatigue sets. This reduces his/her efficiency. Thus, the worker requires rest or break. Fatigue study identifies the intervals required while completing a task. It suggests that standard break timings should be decided for improving the working performance of workers.

(d) **Method Study**- This study aims at finding out the best method of completing any work. It takes into account each and every activity involved in the task. It helps in reducing the costs and maximising the satisfaction of the customers. Assembly line production, used by Ford Motors is a popular example of method study.

(e) **Simplification and Standardisation of Work**- Taylor holds up standardisation as the very basis of techniques of scientific management. Standardisation as the word suggests implies setting of milestones or benchmarks for any work or activity. Various other techniques by Taylor, such as method study, fatigue study and time study are also based on the concept of standardisation.

The objectives of standardisation are:

- (i) To reduce a given line or product to fixed types, sizes and characteristics.
- (ii) To establish interchange ability of manufactured parts and products.
- (iii) To establish standards of excellence and quality in materials.
- (iv) To establish standards of performance of men and machines.

Simplification on the other hand means eliminating any unnecessary diversifications in the product. It aims at fuller utilisation of the resources, reducing inventories and increasing the turnover. It helps in reducing the costs of labour and machines. This technique helps in optimum utilisation of resources and removes the unnecessary costs related to work.

Question 5 : Discuss the differences between the contributions of Taylor and Fayol.

Solution :

| Basis of Difference | Taylor's Contributions | Fayol's Contributions |
|----------------------------|---|--|
| Contribution | Scientific Management or 'Taylorism' Theory was given by Taylor in 1911. | General Theory of Administration or 'Fayolism' was given by Fayol in 1916 |
| Personality | Taylor was a mechanical engineer/scientist. | Fayol was a mining engineer/practitioner. |
| Principles and Techniques | Taylor introduced Principles of Scientific Management and Functional Foremanship along with the techniques such as method study, motion study, etc. | Fayol introduced 14 Principles of Management such as Order, Equity, Espirit de Corps, etc. |
| Application of Principles | Principles are applicable to specialized situations. | Principles are accepted everywhere and are universal in nature. |
| Perspective | Taylor's principles are based on improving the conditions of floor level workers first. | Fayol's principles are based on the functions of the higher-level managers. |
| Emphasis and Focus | Focus was on improving the overall administration of an organisation. | Focus was on increasing the productivity along with the worker's efficiency. |
| Title | Taylor is called 'Father of Scientific Management' | Fayol is called 'Father of General Management' |

Question 6 : Discuss the relevance of Taylor and Fayol's contribution in the contemporary business environment.

Solution :

The principles of Taylor and Fayol play an important role in contemporary business environment. Taylor's scientific management principles and Fayol's administrative principles provide guidelines to the managers in taking actions and decisions. They help in explaining and predicting the business situations and thereby, guides the managerial behaviour. Although they cannot be used as it is but they prove as important guidelines in complex real business situations. Managers can use them in different situations to solve the recurring problems. Decisions taken on the basis of these principles are based on facts and logic and are thereby, more appropriate. They are developed over time by a continuous process of observations and experimentation. Thus, they provide useful insight into the real business situations. These principles have universal applicability and are used by all organisations irrespective of the size, nature, region. Moreover, as these principles are based on the human behaviour so, they help in establishing a

relationship between human and material resources in an organisation. The applicability of these principles helps in overall development of the organisation. These principles aim at increasing the overall efficiency in the organisation along with optimum utilisation of resources. They also highlighted the importance of cooperation among the employees and the managers while maintaining a harmonious work environment.
