



WINTER – 13 EXAMINATION Subject Code: 12219 Model Answer

Important Instructions to examiners:

- 1) The answers should be examined by key words and not as word-to-word as given in the model answer scheme.
- 2) The model answer and the answer written by candidate may vary but the examiner may try to assess the understanding level of the candidate.
- 3) The language errors such as grammatical, spelling errors should not be given more Importance (Not applicable for subject English and Communication Skills).
- 4) While assessing figures, examiner may give credit for principal components indicated in the figure. The figures drawn by candidate and model answer may vary. The examiner may give credit for any equivalent figure drawn.
- 5) Credits may be given step wise for numerical problems. In some cases, the assumed constant values may vary and there may be some difference in the candidate's answers and model answer.
- 6) In case of some questions credit may be given by judgement on part of examiner of relevant answer based on candidate's understanding.
- 7) For programming language papers, credit may be given to any other program based on equivalent concept.

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Q-1 Solve any five of the following:

(5x4=20)

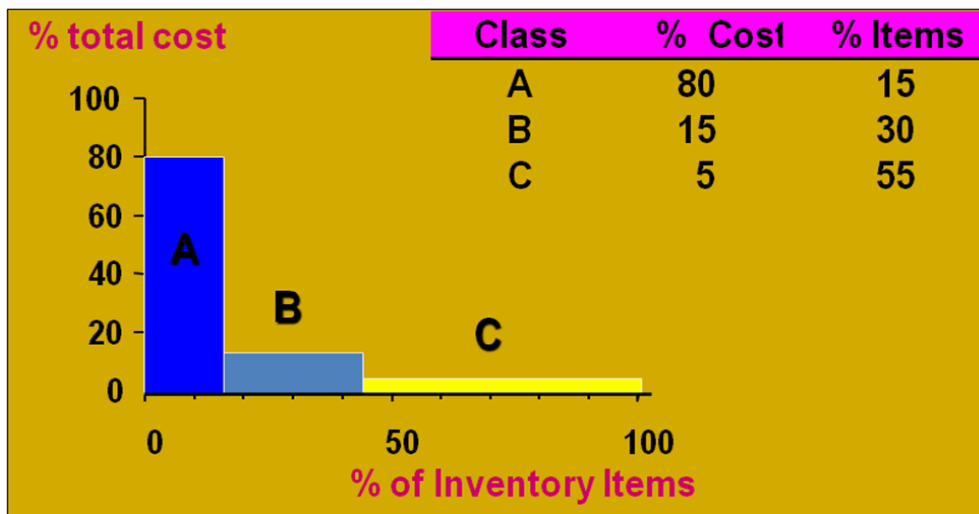
a) Explain 5's'. How it is implemented?

Ans. A Japanese concept for good housekeeping states 5'S as under.

1. **Seiri (Segregation)**:- Dirt, dust, rubbish and all unwanted wastes or material should be collected and segregated first.
2. **Seiton (Systematic Arrangement)**:- There should be effective arrangement of safe disposal of segregated wastes. This also includes preventive arrangement such as guards, covers, dust collectors, ventilation etc.
3. **Seiso (Spick and Span/Cleaning)**:- Main activity of good housekeeping is cleaning. It includes cleaning of floors, walls, ceiling, sanitary and welfare facilities, machinery, PPE's etc.
4. **Seiketsu (Standardizing/Maintenance)**:- maintenance of standard. This suggests compliance of statutory provisions and national or international standards for safety, quality, cleanliness and environment.
5. **Shitsuke (Self Discipline)**:- This indicates duty of everybody to follow rules, regulations, instructions, notices, orders, appeal etc. for maintain good housekeeping and safety.

By using above steps serially 5's can be implemented in organization.

b) Explain concept of 'ABC Analysis' in inventory control.



Ans.: As the sizes of the industry increases, the number of items to be purchased also increases. Purchase and control of all items at a time and in a bulk much before their use, irrespective of



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their usage value, price or procurement problems, blocks and involves a lot of money and man hours, and is therefore uneconomical.

ABC analysis helps segregating the items from one another and tells how much valued the item is and controlling it to what extent is in the interest of the organization.

ABC analysis furnishes the following information:

1. **A-Items** are high valued but are limited or few in number. They need careful and close inventory control. Such items should be thought of in advance and purchased well in time. A detailed record of their receipt and issues should be kept. And proper handling and storage facilities should be provided for them. A-items are generally account for 70-80 % of total inventory cost and they constitute about 10 % of the total items.
2. **B-Items** are medium valued and their number lies in between A and C items. Such items need moderate control. They are more important than C-items. These items stock of up to 3 months may be kept. These items also require careful storage and handling. B-items are generally account for 20 to 15 % of total inventory cost and they constitute about 15 to 20 % of the total items.
3. **C-Items** are low valued, but maximum numbered items. These items do not need any control, rather controlling is uneconomical. These are the least important items such as clips, all pins, washer, rubber bands etc. they are generally procured just before they finish. No records are normally kept and a safety stock of 3 months or even more can be purchased at an instant. C-items generally account for 10 to 5% of total inventory cost and they constitute about 75% of the total items.

c) How decentralization of departmentation helps in quick decision making.

Ans.

- Decentralization of department means diffusion of authority to department separately. Means the departments becomes independent to take any decision.
- The dispersal of authority of decision-making to the lower level management is termed as decentralization.
- Decentralization of department is a fundamental phase of delegation and extent to which authority is not delegated to department is called centralization of departments.
- The need for decentralization is felt when the business grows in its size which necessitates diversification of department activities.
- Higher level management can concentrate on work
- It develops lower level managers to be promoted to higher level responsibilities.
- It develops creativity and innovativeness in lower level managers.



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- It helps in locating the responsibilities for wrong decisions.

Because of all these reasons and delegated authority the decentralization of departmentation can take quick and faster decisions.

d) What are the main functions of management? Explain any one function.

Ans. Following are the functions of management.

1. Forecasting.
2. Planning.
3. Organizing.
4. Staffing.
5. Directing.
 - Leadership.
 - Communication.
 - Motivation
 - Supervision
6. Coordinating.
7. Controlling.
8. Decision making.

(Min four functions 2 marks)

Planning: (2 marks)

- It is a process about sales, Production, finance etc.
- Forecasting is the base of planning.
- Planning may be prior planning, active planning, now it is strategic planning.
- Planning is necessary because it can be used as a tool for control.

e) State the difference between shares and debentures.

Ans. (four points one mark each)

Shares	Debentures
1. A shareholder is an owner of the company, i.e., he has ownership interest in the company.	1. A debenture holder is a creditor only and has no control over the affairs of the company.
2. Dividend is paid on shares.	2. A fixed rate interest is paid on debentures.
3. It bases upon the types of share whether the annual dividend is paid or not.	3. Interest is paid whether the company runs in profit or loss.
4. Money of the shareholder is not refunded to	4. A debenture holder gets his money back



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him.	after the stated number of years.
5. After liquidation the all liabilities are paid off then only after (if money available) dividend is given.	5. After liquidation the debenture holder gets his money.

f) What is the impact of ‘LPG’ policy on Indian Economy?

Ans. Indian economy had experienced major policy changes in early 1990s. The new economic reform, popularly known as, *Liberalization, Privatization and Globalization* (LPG model) aimed at making the Indian economy as fastest growing economy and globally competitive. The series of reforms undertaken with respect to industrial sector, trade as well as financial sector aimed at making the economy more efficient.

With the onset of reforms to liberalize the Indian economy in July of 1991, a new chapter has dawned for India and her billion plus population. This period of economic transition has had a tremendous impact on the overall economic development of almost all major sectors of the economy, and its effects over the last decade can hardly be overlooked. Besides, it also marks the advent of the real integration of the Indian economy into the global economy.

Impacts of liberalization, Privatization & Globalization on Indian Economy

- It frees the resources for more productive utilization
- Private concerns tend to be profit oriented and transparent in their functioning.
- Since the system becomes more transparent, all underlying corruptions are minimized
- Permit the private sector to contribute to economic development.
- India’s share in the world ‘export’ which had fallen 0.53% in 1991 from 1.78% percent in 1950, has reversed trends and has improved to 1% in 2005.
- Foreign technology agreement developed.
- Foreign investment increased.
- Opportunities for overseas trade
- Our foreign currency reserves which had fallen to barely one billion U.S. dollars in June, 1991 rose substantially to about 180 billion U.S dollars in March 2007

Following are the salient features of the LPG policy.

1. Foreign technology agreement.
2. Foreign investment.
3. MRTP Act, 1969



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4. Industrial licensing
5. Deregulation
6. Beginning of privatization
7. Opportunities for overseas trade
8. Steps to regulate inflation
9. Tax reforms
10. Abolition of license Raj or Permit Raj

g) What is staffing? How it is different than simple recruiting?

Ans. Staffing:- (2+2 marks)

- It is a process of identifying, recruiting, training, promoting the workforce.
- Staffing is the process by which manager's select, trains, promote and retire their subordinates.
- Staffing involves the developing and placing of qualified people in the various jobs in the organization.
- Staffing is a continuous process. The aim is to have appropriate persons to move into vacated positions or positions newly created in the enterprise.

Whereas Recruitment is a major step in the total staffing process.

- Recruitment may be described as the process of getting potential employees willing to apply for a job with the concern or firm.
- In other words, recruitment develops and maintains adequate manpower to run an organization efficiently.
- The term Recruitment is used to describe the attraction of applicants from among whom to select.
- It is the process of searching for prospective employees and stimulating them to apply for jobs in the concern.
- Hence recruitment is the base of staffing process.

Q-2 Solve any four of the following:

(4x4=16)

a) Authority and responsibility are two sides of same coin. Explain.

Ans.

- Responsibility means accountability. It may be considered as the obligation of a subordinate to his boss to do a work given to him.
- Authority means right (to command) and power to act.



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- Since the top man in the organization cannot do each and everything himself alone, a definite chain of responsibility and authority is provided from the top executive to each employee, through several layers.
- Lines of responsibility should be made very clear in order to facilitate ready flow of communication and control.
- Authority empowers the superior to make a subordinate to do the work. Everybody in the organization, from top level downwards, possesses some authority to secure cooperation from subordinates.
- Authority and Responsibility must go together if the goals of the organization are to be achieved efficiently and effectively.
- When an employee is authorized to take up a job, he is held responsible for its performance also.
- Whereas authority to command and act can be delegated, the responsibility cannot. The responsibility of the boss for the acts of his subordinate is absolute. The chief executive is still held responsible for poor quality of the products made by his subordinates.

-

b) Why there is disinvestment policy in Govt. undertaking companies?

Ans.

Because of following salient features there is disinvestment policy in govt. undertaking companies.

- Citizens have every right to own part of the shares of Public Sector Undertakings
- Public Sector Undertakings are the wealth of the Nation and this wealth should rest in the hands of the people.

The following are main reasons of disinvestment policy in Govt. undertaking companies

- To reduce the financial burden on the Government
- To improve public finances
- To introduce, competition and market discipline
- To fund growth
- To encourage wider share of ownership
- To depoliticize non-essential services



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c) How accidents affects its nearby society? Give any example.

Ans. The society suffers losses in three ways:

1. The family – a part of the nearest society – suffers pain, financial hardship and service and maintenance loss by the injured person or his death.
2. The society receives diseases, hygiene problems due to leakage of any harmful gases.
3. The society bears the social and financial burden of maintenance of all injured person and their families. Thus knowingly or unknowingly every member of the society bears a proportion of the costs of accidents and the society losses services or help by that person.

Therefore employee, employers and society all collectively get affected by accidents.

The Bhopal gas tragedy is the biggest example of accident that ruined all the nearby society violently and abruptly. In Dec 1984 Bhopal (M.P.) faced gas leak accident from Union carbide India limited. MIC (methyl isocyanate) gas from the storage tank of company get released due to chemical reaction, and spread in nearby areas which caused almost 3,787 deaths, 5, 55,125 injured and 3900 permanently disable persons. Bhopal gas tragedy is the biggest example that how any accident can ruined whole life of society.

In these way accidents affects a lot to society so they must prevented by taking proper precautions.

d) What is profit and loss statement? Draw its format showing major components.

Ans. (2+2 marks)

- Profit and loss account is a statement of revenues and expenses for a specific period of time.
- It is also called income statement of firm.
- The statement starts with a report of the income for the period, from which all the costs are deducted.
- The net figure is the profit or loss for the period.
- Profit and loss statement is a type of financial statement which is a statement for internal as well as external communication regarding financial performance of the company.



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A. B. C. Co.	
Profit and loss statement	
Month Ended March 31, 1977	
Revenues:	
Sales.....	Rs. 50,000
Expenses:	
Costs of goods sold.....	Rs. 25,000
Selling expenses.....	Rs. 8,000
Administrative expenses.....	Rs. 10,000

Total expenses	Rs. 43,000
Income tax	Rs. 5,000

Net income (or Net profit)	Rs. 38,000

OR

Particulars	Rs (Debit)	Particulars	Rs (Credit)
To Opening stock	Nil		
Costs of goods sold	25,000	By sales	50,000
Selling expenses	8,000		
Administrative expenses	10,000		
Income tax	5,000		
Profit	2000		
Total	50,000	Total	50,000

e) What is the difference between procurement and purchasing?

Ans. (four points one mark each)

Procurement	Purchasing
1. Procurement is concerned with the overall gathering of resources.	1. Purchasing is the specific act of acquiring something by paying money for it.



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2. The term procurement department used to describe the department that buys the things that a company uses itself in its daily operations such as paper, printer ink, toner etc. for an office.	2 . Purchasing involve receive and deliver materials at right place.
3. Procurement is the acquisition of goods and services at the best possible total cost of ownership, in the right quantity and quality, at the right time, in the right place and from the right source.	3. Purchasing is just buying goods/items as per the requirement of different departments of the organization.
4. Simple procurement may involve nothing more than repeat purchasing.	4. Purchasing is one from of procurement
5. The procurement process takes into account factors such as the whole life costs of the good or service.	5. simple purchasing do not takes into account factors such as whole life costs of the good or service.

f) How ‘Quality circle’ helps in improving quality of organization?

Ans. Quality circle is a small group of employees (8-10) working at one place, who come forward voluntarily and discuss their work related problems once in a week (say) for one hour Workers meet as a group and utilize their inherent ability to think for themselves for identifying the constraints being faced by them and pooling their wisdom for final solutions that would improve their work life in general and contribute towards better results for the organization.

Quality circle itself is a philosophy of workers direct involvement in solving problems that affects their work, their output and their workplace. Because of quality circle the employee get involve in participation process with management. Employee uses their brain to solve the problems so employees get developed. Better worker management relation gets developed. Good housekeeping, good quality due to improved productivity achieved. Costs get reduced. More improved safety practices achieved. Better mutual trust gets developed. Better communication achieved. Working without tension culture gets developed. Effective team work achieved. Greater sense of belongingness developed.



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Q . 3 Solve any Four of following

a) Explain the term

i. Activity

ii. Event

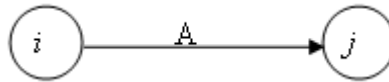
iii. Float

iv. Critical Path

Ans : (one mark each)

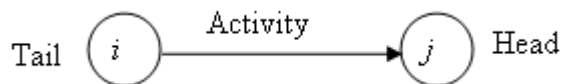
Activity

Activity An activity represents some action and is a time consuming effort necessary to complete a particular part of the overall project. Thus, each and every activity has a point of time where it begins and a point where it ends. It is represented in the network by an arrow as follows. Here A is called the activity and i and j are start and end nodes.



Event

The beginning and end points of an activity are called events or nodes. Event is a point in the time and does not consume any resources. It is represented by a numbered circle. The head event called the j^{th} event has always a number higher than the tail event called the i^{th} event.



Float

Float is defined as the difference between the latest and the earliest activity time.

Float is defined as the difference between the latest start time and earliest start time or latest finish time and earliest finish time.

Critical path

The sequence of critical activities in a network is called the critical path. It is the longest path in the network from the starting event to the ending event and defines the minimum time required to complete the project. In the network it is denoted by double line. This path identifies all the critical activities of the project.

The Float on the activities on critical path is zero.



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b) State the importance of 'ERP' in material management

Enterprise Resource Planning (ERP) makes single entry of data and to be fed once only.(avoids duplicate/double entry)

1. Complete **visibility** into all the important processes across various departments of an organization (especially for senior management personnel).
2. Automatic and coherent **work-flow** from one department / function to another to ensure smooth transition/ completion of processes.
3. A unified and single **reporting** system to analyze the statistics/ numbers/ status etc in real-time, across all the functions / departments.
4. Since **same software** is used across all departments – this can avoid individual departments having to buy and maintain their own software systems.
5. Certain ERP vendors can extend their ERP systems to provide **Business Intelligence** functionalities as well.
6. Advanced **e-commerce integration** is possible with ERP systems that can handle web-based order tracking/ processing.
7. There are **various modules** in an ERP system like Finance/ Accounts, Human Resource Management, Manufacturing, Marketing / Sales, Supply Chain / Warehouse Management, CRM, Project Management, etc.
8. Since ERP is a **modular software** system, its possible to implement either a few modules (or) many modules based on the requirements of an organization. If more modules implemented, the integration between various departments might be better.
9. Single Database is implemented on the back-end to store all the information required by the ERP system and that enables **centralized storage** / back-up of all enterprise data.
10. ERP systems are more **secure** as centralized security policies can be applied to them and all the transactions happening via the ERP systems can be tracked.
11. ERP systems provide visibility and hence enable better/ faster **collaboration** across all the departments.
12. It is possible to integrate other systems (like bar-code reader, for example) to the ERP system through an **API** (Application Programing Interface).
13. ERP systems make it **easier** for order tracking, inventory tracking, revenue tracking, sales forecasting and related activities.
14. ERP systems are a boon for managing **globally dispersed** enterprise companies.

[Any 4 point 4 marks]



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- c) State different types of taxes. Explain VAT.

There are two main categories of taxes **1 mark**

1. Direct Taxes
2. Indirect Taxes

A **value added tax (VAT)** is a form of consumption tax.

From the perspective of the buyer, it is a tax on the purchase price. From that of the seller, it is a tax only on the value added to a product, material, or service, from an accounting point of view, by this stage of its manufacture or distribution.

The manufacturer remits to the government the difference between these two amounts, and retains the rest for themselves to offset the taxes they had previously paid on the inputs.

The purpose of VAT is to generate tax revenues to the government similar to the corporate income tax or the personal income tax.

The value added to a product by or with a business is the sale price charged to its customer, minus the cost of materials and other taxable inputs.

A VAT is like a sales tax in that ultimately only the end consumer is taxed. It differs from the sales tax in that, with the latter, the tax is collected and remitted to the government only once, at the point of purchase by the end consumer.

With the VAT, collections, remittances to the government, and credits for taxes already paid occur each time a business in the supply chain purchases products.

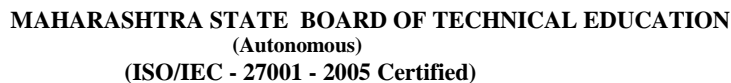
[any 3 point 3 marks]

- d) Explain the main provisions of ‘workmen’s compensation Act’.

The main provisions of the Act are:-

An employer is liable to pay compensation:-

- (i) If personal injury is caused to a workman by accident arising out of and in the course of his employment.



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- [4 marks]**

e) What are the different types of inventories? What is the aim of material management?

Types of Inventories

1. Raw materials
2. Finished Goods
3. Work In Progress (W.I.P.)
4. Indirect material (like Spare parts, lubricants) **(2 marks)**

AIM OF MATERIAL MANAGEMENT

To get

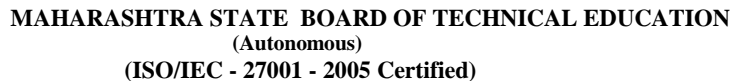
1. The Right quality
 2. Right quantity of supplies
 3. At the Right time
 4. At the Right place
 5. For the Right cost
- [2 marks]**

f) State the various type of Budgets ? Explain Labour Budget

Types of budget

1. Fixed budget
 2. Variable budget
 3. Functional budget
 - Sales Budget
 - Production Budget
 - Capital Expenditure budget
 - Material and Purchase budget
 - Labour budget.
 - Selling and distribution cost budget
 - Cash budget.
- 2 marks**

Labour budget deals with the cost management or estimation with the employees and labours working within the boundaries of an organization with the details of project carried out . the



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[2 marks]

[16 Marks]

Management Principles developed by Henri Fayol:

1. Division of work
2. Authority
3. Discipline
4. Unity of command
5. Unity of direction
6. Subordination of Individual interests to the general interests.
7. Remuneration.
8. Centralization.
9. Scalar Chain.
10. Order
11. Equity
12. Stability of tenure of personnel
13. Initiative
14. Esprit de Corps

[4 marks]

1. **DIVISION OF WORK:** Work should be divided among individuals and groups to ensure that effort and attention are focused on special portions of the task. Fayol presented work specialization as the best way to use the human resources of the organization.



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2. **AUTHORITY:** The concepts of Authority and responsibility are closely related. Authority was defined by Fayol as the right to give orders and the power to exact obedience. Responsibility involves being accountable, and is therefore naturally associated with authority. Whoever assumes authority also assumes responsibility.
3. **DISCIPLINE:** A successful organization requires the common effort of workers. Penalties should be applied judiciously to encourage this common effort.
4. **UNITY OF COMMAND:** Workers should receive orders from only one manager.
5. **UNITY OF DIRECTION:** The entire organization should be moving towards a common objective in a common direction.
6. **SUBORDINATION OF INDIVIDUAL INTERESTS TO THE GENERAL INTERESTS:**
The interests of one person should not take priority over the interests of the organization as a whole.
7. **REMUNERATION:** Many variables, such as cost of living, supply of qualified personnel, general business conditions, and success of the business, should be considered in determining a worker's rate of pay.
8. **CENTRALIZATION:** Fayol defined centralization as lowering the importance of the subordinate role. Decentralization is increasing the importance. The degree to which centralization or decentralization should be adopted depends on the specific organization in which the manager is working.
9. **SCALAR CHAIN:** Managers in hierarchies are part of a chain like authority scale. Each manager, from the first line supervisor to the president, possess certain amounts of authority. The President possesses the most authority; the first line supervisor the least. Lower level managers should always keep upper level managers informed of their work activities. The existence of a scalar chain and adherence to it are necessary if the organization is to be successful.
10. **ORDER:** For the sake of efficiency and coordination, all materials and people related to a specific kind of work should be treated as equally as possible.
11. **EQUITY:** All employees should be treated as equally as possible.
12. **STABILITY OF TENURE OF PERSONNEL:** Retaining productive employees should always be a high priority of management. Recruitment and Selection Costs, as well as increased product-reject rates are usually associated with hiring new workers.
13. **INITIATIVE:** Management should take steps to encourage worker initiative, which is defined as new or additional work activity undertaken through self direction.



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14. **ESPIRIT DE CORPS:** Management should encourage harmony and general good feelings among employees. **[Any two Explanation 4 marks]**

b) I) What is the term 'limited' in joint stock company referred so?

Limited refer to:

-A **limited company** is a company in which the liability of members or subscribers of the company is limited to what they have invested or guaranteed to the company.

-Limited companies may be limited by shares or by guarantee.

-And the former of these, a limited company limited by shares, may be further divided into public companies and private companies. **[4 marks]**

II) What is the difference between Joint stock public limited company and public undertaking company

A joint-stock company is a business entity which is owned by shareholders. Each shareholder owns the portion of the company in proportion to his or her ownership of the company's shares (certificates of ownership). This allows for the unequal ownership of a business with some shareholders owning a larger proportion of a company than others. Shareholders are able to transfer their shares to others without any effects to the continued existence of the company.

In modern corporate law, the existence of a joint-stock company is often synonymous with incorporation (i.e. possession of legal personality separate from shareholders) and limited liability (meaning that the shareholders are only liable for the company's debts to the value of the money they invested in the company). And as a consequence joint-stock companies are commonly known as corporations or limited companies.

Some jurisdictions still provide the possibility of registering joint-stock companies without limited liability. In the United Kingdom and other countries which have adopted their model of company law, these are known as unlimited companies. In the United States, they are known simply as "joint-stock companies"

Public undertaking company

A government-owned corporation, state-owned company, state-owned entity, state enterprise, publicly owned corporation, government business enterprise, commercial government

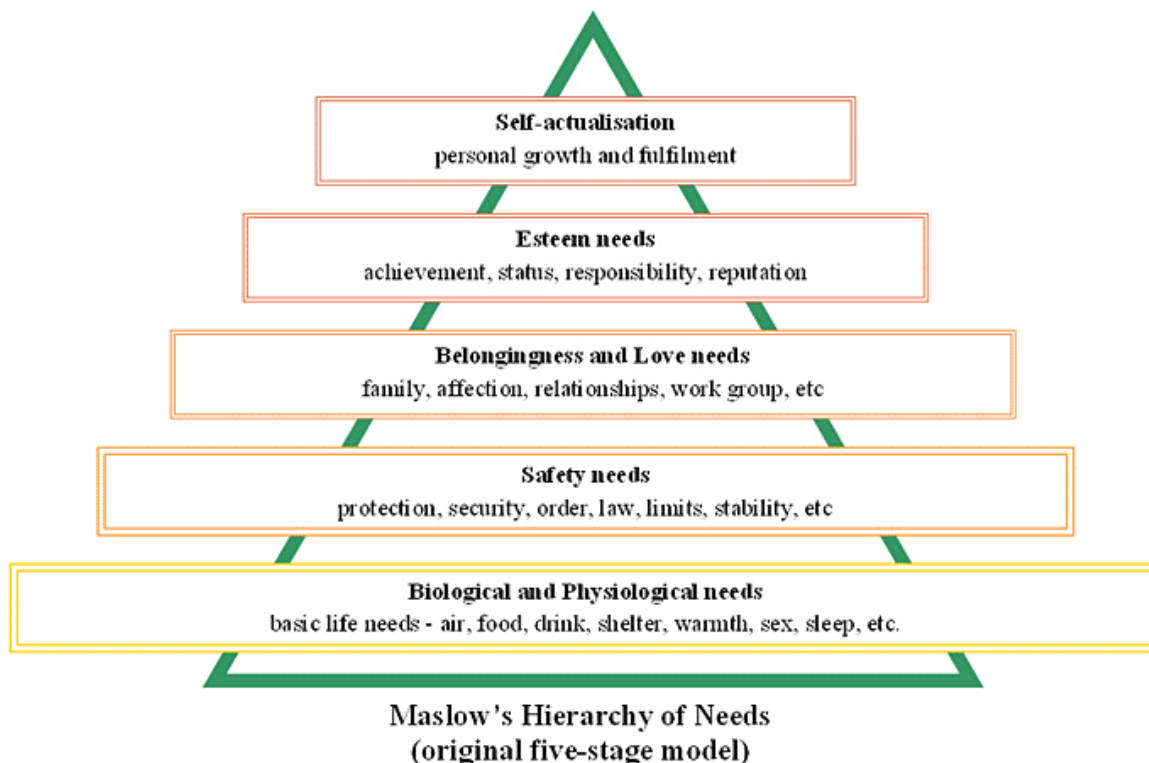
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agency, public sector undertaking or parastatal is a legal entity created by a government to undertake commercial activities on behalf of an owner government. Their legal status varies from being a part of government to stock companies with a state as a regular stockholder. There is no standard definition of a government-owned corporation (GOC) or state-owned enterprise (SOE), although the two terms can be used interchangeably. The defining characteristics are that they have a distinct legal form and they are established to operate in commercial affairs. While they may also have public policy objectives, GOCs should be differentiated from other forms of government agencies or state entities established to pursue purely non-financial objectives.

Government-owned corporations are common with natural monopolies and infrastructure such as railways and telecommunications, strategic goods and services (mail, weapons), natural resources and energy, politically sensitive business, broadcasting, demerit goods (alcohol) and merit goods (healthcare). [Any 4 point 4 marks]

- c) Explain Maslow's theory of motivation with sketch.

[Sketch – 2 mark]



Maslow's hierarchy of needs



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One of the most popular theories of motivation has been propounded by Maslow a famous social scientist. According to him the behavior of an individual at a particular moment is usually determined by his strongest needs, Need have a certain priority or hierarchy. As the more basic needs are satisfied, an individual seeks to satisfy the higher needs. If his basic needs are not met, efforts to satisfy the higher needs should be postponed. Once a need is satisfied it loses its capacity to induce the man to work. Only unsatisfied needs can motivate persons to work. The hierarchy is as follows.

1. **Biological and Physiological needs** - air, food, drink, shelter, warmth, sex, sleep, etc.
2. **Safety needs** - protection from elements, security, order, law, limits, stability, etc.
3. **Belongingness and Love needs** - work group, family, affection, relationships, etc.
4. **Esteem needs** - self-esteem, achievement, mastery, independence, status, dominance, prestige, managerial responsibility, etc.
5. **Self-Actualization needs** - realising personal potential, self-fulfillment, seeking personal growth and peak experiences.

[Explanation – 6 Marks]

Q. No.5 Solve any **TWO** ----- (**1 mark for each (any) points = 4 marks**)

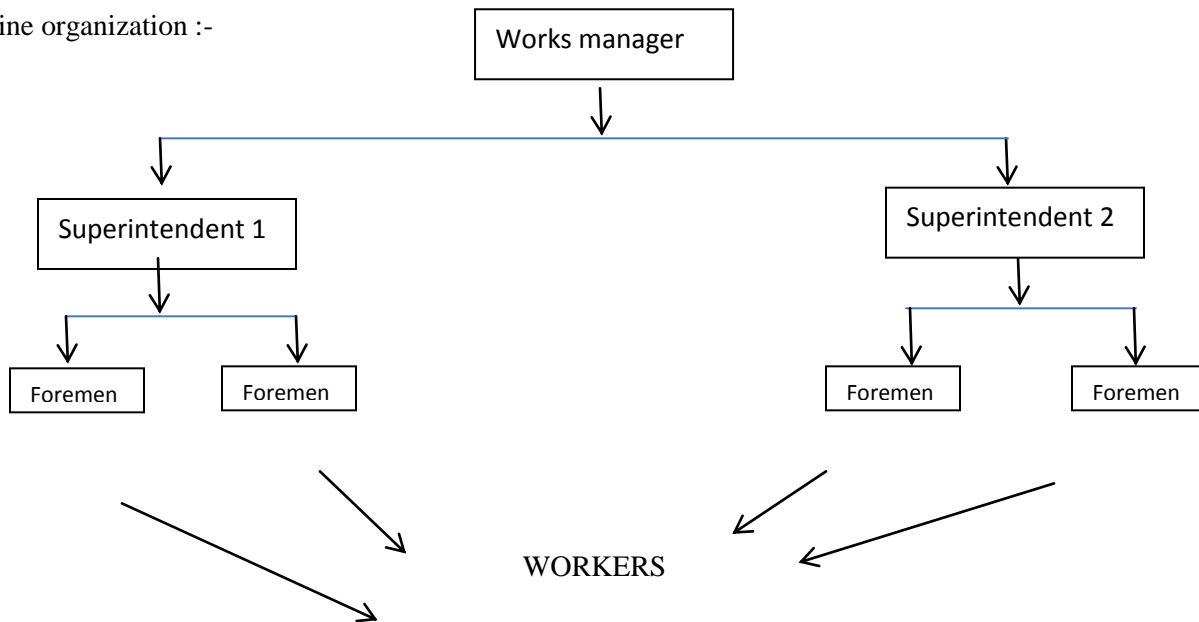
a) Line organization	Line and staff organization
1) Line organization is direct and line are Executives are placed vertically	1) In line and staff organization the line executives marked vertically and staff executives placed Horizontally
2) It is based on relative authority and responsibility of line executives	2) It is based on nature and the kind of operation / activities of line and staff executives
3) The authority flows from works manager to Superintendent to foremen to workers	3) The line executives retains supervisory authority and control whereas staff executives relieves them From certain specialised activities.
4) It neglects specialists	4) it includes specialists as staff executives

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- 5) Due to lack of specialization more wastage of Materials and manhour's 5) specialization restricts wastage of material and manhours
- 6) It is suitable for small concerns free from complexities in organization hierarchy 6) It is suitable for medium and larger enterprises having complexities in organization hierarchy.

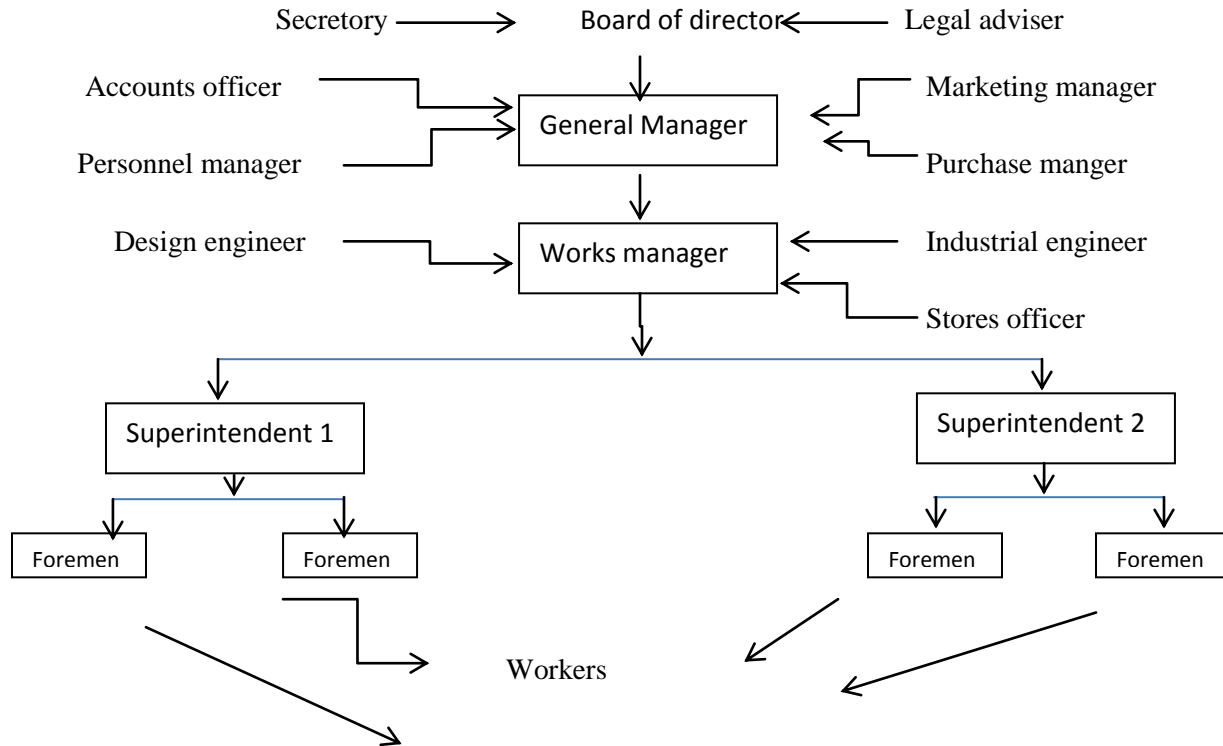
(2 marks for each figure)

Line organization :-



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Line and staff organization:-



b) Economic order quantity can be defined as the quantity which permits lowest cost per unit and is most advantageous. EOQ mainly focuses on the right quantity of items to be stored to reduce the inventory carrying cost. In this manner to determine exact quantity of order the EOQ models are useful.

(2 marks for Definition)

Importance of Buffer stock in Inventory – (4 Marks for any 4 points given below)

- 1) Reduces the risk of out of stock
- 2) Reduces the loss due to opportunity cost
- 3) Easier to meet customer demand and ultimately customer satisfaction
- 4) Helps to reduce lead time by providing sufficient inventory before stock out
- 5) Provides cushioning to the production by non-interruptive supply
- 6) Helps in preparing material resource planning
- 7) Beneficial in preparing master production schedule
- 8) Helps to keep minimum inventory level

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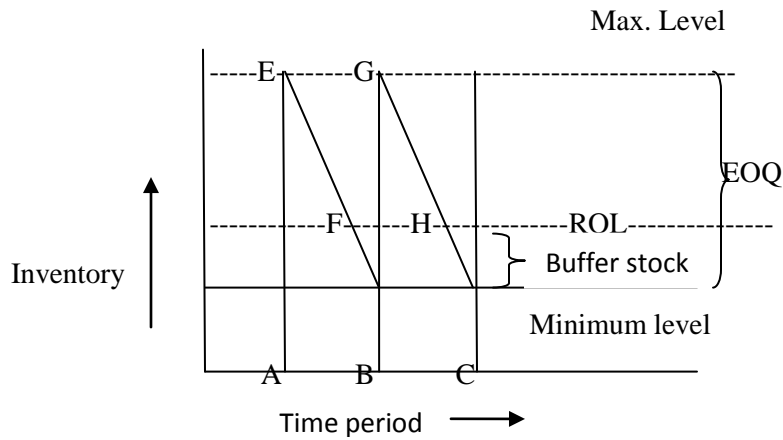
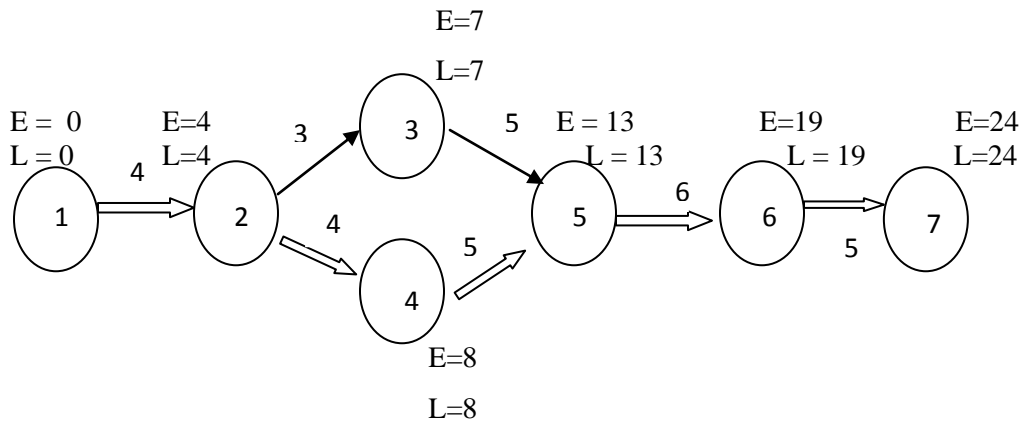


Fig :- Buffer stock (2 Marks for Figure)

Q5. c) Network diagram :-



Critical Path :- 1 – 2 – 4 – 5 – 6 - 7

(2 Marks for Network diagram and 2 marks for Critical path)

Activity	Duration (D)	Start time		Finish Time		Total float
		Earliest	Latest	Earliest	Latest	
1-2	4	0	0	4	4	0
2-3	3	4	4	7	7	0
3-5	5	7	8	12	13	1

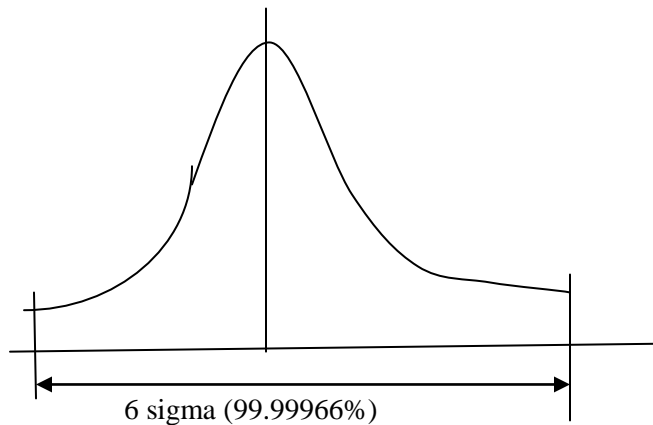


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2-4	4	4	4	8	8	0
4-5	5	8	8	13	13	0
5-6	6	13	13	19	19	0
6-7	5	19	19	24	24	0

(2 Marks for EST and EFT and 2 marks for calculating Float)

Q6. Attempt Any Four



Sigma Level	Defect Rate (PPM)	Yield in %
6sigma	3.4	99.99966
5sigma	233	99.9767
4sigma	6,210	99.3790
3sigma	66,807	93.3193
2sigma	308,537	69.1462
1sigma	690,000	-

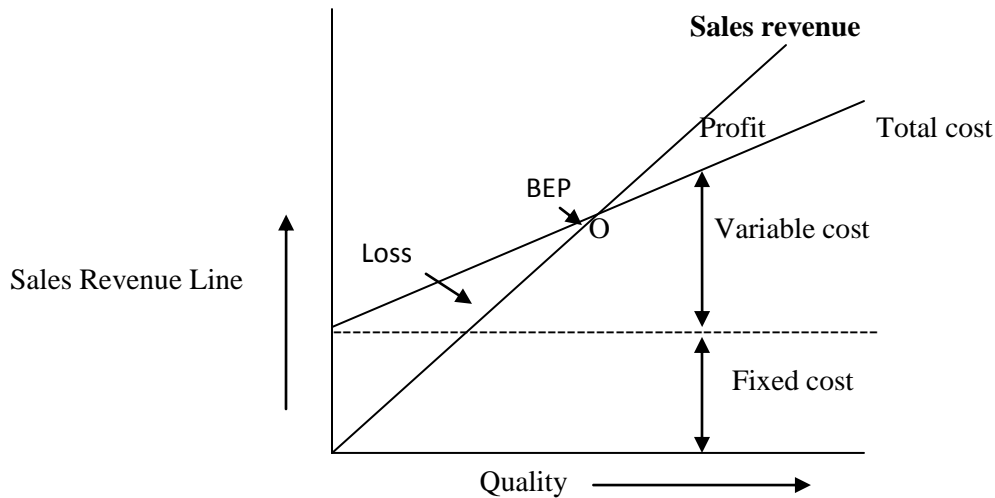
- 1) Continuous focus on Six sigma
- 2) Extremely focused on manufacturing processes to avoid variation

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- 3) Vast control on Business processes
- 4) Continuous process improvement program
- 5) Continuous striving for perfection
- 6) Focusing on root causes and their Prevention
- 7) Setting high targets
- 8) Cross functional collaboration within the organization

(1 mark for each 2 points)

a) Break even chart :- (**4 marks for neat sketch and labeling**)



c) Objectives of JIT :- (**2 marks for any four point**)

- 1) To reduce Inventory Carrying cost
- 2) To utilize working capital of industry
- 3) To reduce the lead time
- 4) To produce the products only when it requires

Differs from MRP :- (**2 marks for difference**)

JIT is the strategic inventory management whereas the MRP is the computational technique which converts master schedule for end products into a detailed schedule for raw material and



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components. MRP utilizes various tools for input such as MPS, BOM, Forecasting, Engineering changes to ensure material whereas JIT used to fulfill this material requirement at right time.

d) Different types of partners with their roles:- (**2 marks for classification and 2 for role**)

1) Sleeping partner:- Contributes capital , shares profit, shares losses

2) Active partner :- Active participation in all day to day activities,(manager, controller, adviser)

3) Secret partner :- Not publically known but participate in affairs in business

4) Nominal partner: - contributes their goodwill and credit from market for business enhancement

5) Minor partner: - with consent of other partners they exists but not legally and may contribute as sleeping partners

6) Partner at will: - they contribute in all aspects of business till trust, faith exists

7) Partners in profit only: - just shares profit and do not contribute anything else

e) Scientific management differs from traditional management: - (**1 mark for each 2 points**)

1) Scientific management analyses work scientifically

2) Scientific management does not rely on thumb rules instead they used scientific basis

3) Utilizes time and motion study to do job ergonomically right

4) Scientifically selects best suited workers for specific job

5) Train and develop each worker for specific job

6) Divide the works

7) Standardization in work and processes

8) Considers working conditions



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Q6. f) Intellectual property rights:- (2 Marks for definition and 2 for Types)

The general term for the legal rights protecting innovation is intellectual property rights (IPRs). It protects right of the person's ideas, innovation, trademarks, formulae etc.

IP includes inventions, design, literary, artistic work etc.

Types of IPR :-

- 1) Copyrights
- 2) Trademarks
- 3) Geographical indications
- 4) Trade secrets
- 5) Patents
- 6) Industrial designs