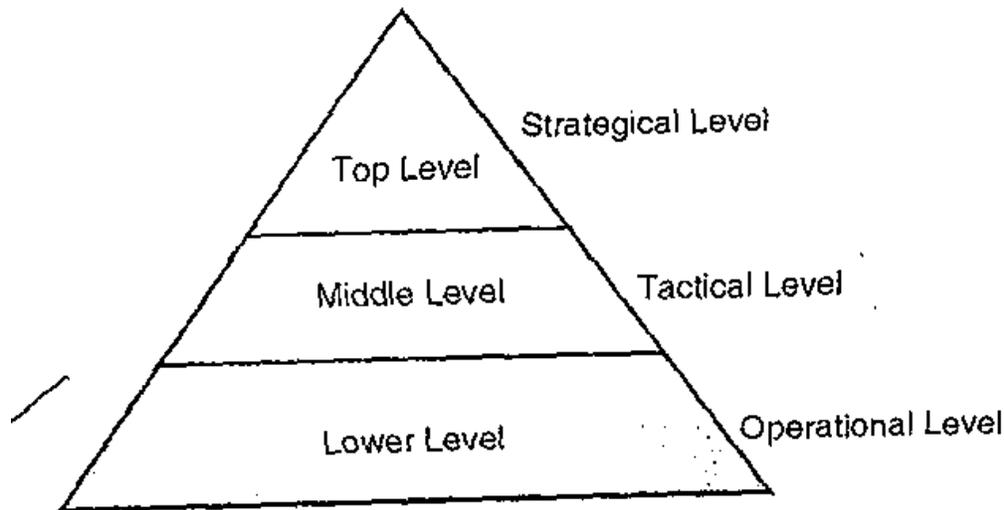




**Important Instructions to examiners:**

- 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.

Q. 1A	Attempt any Three	Marks
i)	<p>What is globalization? State its advantages</p> <p><b>Ans:-</b> Globalisation means integrating the economy of a country with the global/world economy. International companies seeking local market volume may spread their growth in more than one country. These companies can take advantage of their specialization and expertise in a particular field.</p> <p><b>Advantages:</b></p> <ol style="list-style-type: none"><li>1) Market size increased</li><li>2) Competition created Quality awareness among the producers.</li><li>3) Excellences in output has been increased.</li><li>4) Collaboration and Business merging increased.</li><li>5) Employment opportunity increased</li><li>6) Customer got key importance due to survival approach of the business in the competition.</li><li>7) Quantum of Expert increased an foreign exchange helped to make Indian Economy stronger.</li><li>8) Indian market , Indian product, Indian attitude got identified in global market.</li><li>9) Indian culture, Indian traditions got appreciation all over the world.</li><li>10) Foreign Investor invested huge capital in India's development.</li><li>11) Scope for expansion for private sector.</li></ol>	<p>02</p> <p>Any 4</p> <p>02</p>
ii)	What are different levels of management? State major function of these levels of management.	



01

### 1 Top level of management (1)

This level includes people like Managing Directors (MD), Chairman, Chief Executive officers (CEO) etc. This level is known as strategic level because all important decision related to whole organization is taken by top management.

- The functions of top level management are :01
  - a) Defining goal of an organization or business.
  - b) Defining mission and vision.
  - c) Making different long term policies for an organization,

01

### 2. Middle Level of Management

- Middle level of management includes people who are designated as senior managers, Managers of different departments like Finance, HR, Production etc, junior managers, Supervisors etc. manages the whole organization and reach to the goal defined by Top management.

- These middle level managers perform different management functions to achieve the vision of organizations as follows :

- a) Planning of their work
- b) Allocating different resources as required.
- c) Monitor the progress.
- d) Direct and control the people and processes.
- e) Reporting to the top management

01

### 3. Lower Level Management

- This level is known as operational level. It includes people like clerks, Supervisors, data entry operators, in-charge of different departments, Foreman etc.

- People working at this level do day to day activities which are required to complete the goal of overall organization. The operations could be day to day production, payments, purchase, sales, receipts, stock taking etc.

- The functions done at this level are:
  - a) Conduct day to day activities.
  - b) Monitor daily progress
  - c) Reporting to middle level management.

01



iii)	<p>Define Scientific management. State its importance</p> <p>Ans:-</p> <ul style="list-style-type: none"><li>-Scientific Management is the result of applying scientific knowledge and scientific methods to the various aspects of management and the problems that arise from them.</li><li>-It tries to make the best use of production resources i.e. manpower, machines, materials, money etc..</li><li>-It discovers the economical and efficient methods of production so as to reduce effort and eliminate wastage of time and motions.</li><li>-It investigates work on scientific basis, selecting the best worker for a task and training him further to acquire desired skill, developing co-operative spirit between management and workers.</li><li>- Thus with use of Scientific Management, greater efficiency is achieved in industrial operations and productivity increased.</li></ul>	04
iv)	<p>State the importance of planning as a function of management</p> <p>Planning means “Thinking before doing” . Planning involves the formulation of what is to be done, how, when, and, where it is to be done who is to do it and what results are to be evaluated planning is to lay down companies objective and classify data available and choose best alternate and establish policy. Planning should aim at elimination of wastage of material, idleness, of men machinery and capital.</p>	04
Q1.B	<p>Attempt any ONE</p> <p>i) What is co-ordination? How co-ordination is achieved between departments in an industry</p> <p><b>Coordination</b> is the act of organizing, making different people or things work together for a goal or effect to fulfill desired goals in an organization. Coordination is a managerial function in which different activities of the business are properly adjusted and interlinked.</p> <p>How co-ordination is achieved between departments in an industry (principle of co-ordination )</p> <ol style="list-style-type: none"><li>1 Direct contact : the relationship between the team members and the leader plays an important role in coordination</li><li>2. Start Early: At the start of any work effort should be taken to establish the co-ordination. A careful planning and good communication are keys to better co-ordinate from early stages only.</li><li>3. Continuity: The coordination once established should continue to exist throughout the work.</li><li>4. Interdependence: In a function group, all elements should depend on each other. Result of anybody is affecting others. So the interdependence must be handled smoothly.</li></ol>	02  04
ii)	<p>Sketch suitable type of organization structure for</p> <p>1) Small scale industry 2) large scale industry</p> <p>Justify your answer briefly</p>	

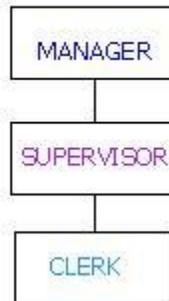


Ans : Small scale industry

a) Line organization

- Line organization is direct and line are Executives are placed vertically
- It is based on relative authority and responsibility of line executives
- The authority flows from works manager to Superintendent to foremen to workers
- It neglects specialists

**SIMPLE LINE ORGANIZATIONAL CHART**



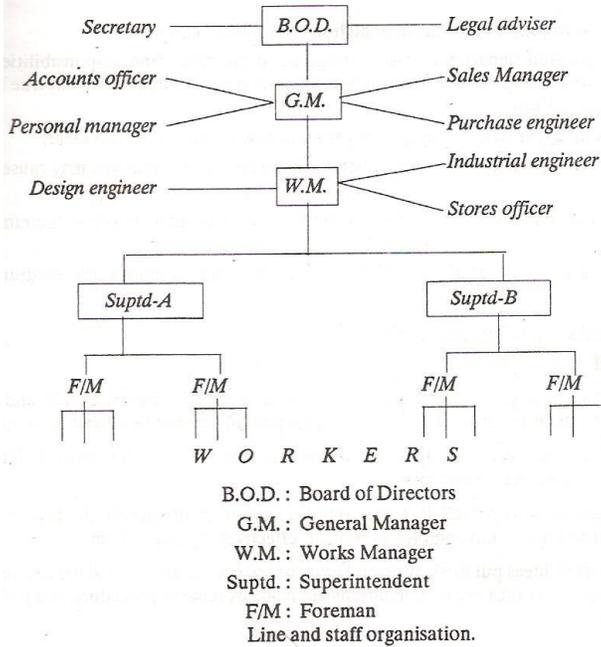
2) large scale industry

**Line and Staff Organisation.**

- It is combination of line and Functional organization
- it is horizontal and vertical , both, in structure
- The Line officers make the decisions and issue instructions to subordinates, the staff officers have no authority to issue instructions. But in their decision-making function, the Line officers receive advice and guidance from the Staff Officers.
- Organization will be successful only when there is joint work of 'Managers' and 'Executers.'

03

03



Q2 a) State the meaning of following principles of management

1. Unity of command
2. Scalar Chain.
3. Equity
4. Esprit de Corps

Ans :

- 1) **Unity of Command:** In order to avoid confusion and conflict, each individual should receive orders and instructions only from one superior and should be accountable to one superior only.
- 2) **Scalar Change:** An organization chart should be prepared for better communication and effective co ordination.
- 3) **Equity of Treatment:** Manager should have fairness in treatment for all his subordinates. There should be an unbroken line of authority and command through all levels from highest to the lowest position in the management
- 4) **Esprit de Corps:** The owner and workers happiness lies in making one another happy. Team work is the sole of good management.

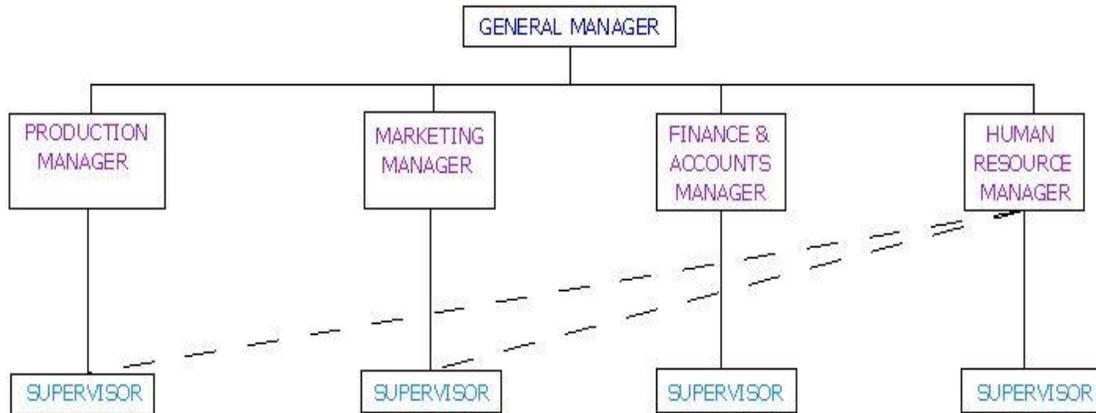
04  
1 mark  
for  
each

b) Explain functional type of organization structure

04



FUNCTIONAL ORGANIZATIONAL CHART



- It is also called as horizontal organization
- There is group of activity as per the functions
- Specialization of functions is the characteristics of this type of organization
- Each group is performing a specific task.

e.g. Milling department is only performing milling operation, may be on different products. Function is same and so the people are specialized in that.

c) State salient features of joint stock company

1. A huge sum of money can be raised.
2. It associates limited liability with it.
3. Shares are transferable.
4. Company's life is not affected by the life (death) of shareholders.
5. Services of specialists can be obtained.
6. Risk of loss is divided among many shareholders.
7. The company associates with it stability, efficiency and flexibility of management.

4

Any 4  
point

d) State advantages and disadvantages of public sector undertaking

Advantages

1. Huge capital can be raised.
2. Every action is as per constitution of India's guideline

02

Any 4



	<ol style="list-style-type: none"><li>3. Services to the nation is the main objective</li><li>4. Equal distribution of wealth.</li><li>5. Completely supported by Government.</li><li>6. Very large scale employment opportunity.</li><li>7. Job security.</li><li>8. Owned by public, so feeling of closeness. More attachment.</li><li>9. Natural resources are used effectively.</li><li>10. Balanced growth of economy</li></ol> <p>Disadvantages</p> <ol style="list-style-type: none"><li>1. Productivity is less.</li><li>2. More political interference.</li><li>3. Corruption is more.</li><li>4. Underutilization of man power</li><li>5. Poor and traditional management.</li><li>6. Decision making is slow.</li><li>7. Efficiency is poor.</li><li>8. No secrecy.</li><li>9. Excessive beurocratic control.</li></ol>	02 Any 4
e)	State any four important functions of personnel management. <ol style="list-style-type: none"><li>1. Procurement and Maintenance of adequate work- force as regards to both- number and quality of personnel.</li><li>2. Education and training of present employees.</li><li>3. Maintaining Satisfactory Personnel Contact and Employee Relationships</li><li>4. Maintaining satisfactory group relationship</li><li>5. Maintaining employees health</li><li>6. Maintaining employees safety</li><li>7. Maintaining employees service activities (employee welfare)</li></ol>	04 Any 4



Q3 a)	<p>Explain recruitment procedure followed in an industry</p> <ol style="list-style-type: none"><li>1. Generation of requirement /vacancy</li><li>2. Applications of candidates</li><li>3. Scrutiny of application</li><li>4. Call for interviews</li><li>5. Employment test</li><li>6. Final interviews</li><li>7. Checking references</li><li>8. Medical /Physical test</li><li>9. Selection and Induction</li></ol> <p>(explain each step in short )</p>	04
b)	<p>State and briefly explain different type of training provided to the workers in an industry.</p> <p>Type of training</p> <ol style="list-style-type: none"><li>1. Induction induction training is a form of introduction for new starters in order to enable them to do their work in a new profession or job role within a business (or establishment)</li><li>2. Skill enhancement This training enriches the present skill as well as imports new skill among the worker.</li><li>3. Training Programmes Training programmes are arranged at all levels, workers to managers, for the development as per the need of time.</li><li>4. Motivation It is useful to all. Focus is more on the person for motivation. Motivation training useful to organization, as only motivated staff can break hurdles in development.</li></ol> <p>(Brief explanation expected )</p>	04
c)	<p>How will you promote safety in your department</p> <ol style="list-style-type: none"><li>1. By conducting Safety training programmes.</li><li>2. Display of Banners, Posters which underlines importance of safety.</li><li>3. Organizing seminars, conferences, Sessions by experts on industrial safety related issues.</li><li>4. Displaying safety related messages, instructions, guidelines near the work area.</li><li>5. Computation in industry related to safety and awards to those departments where minimum accident instances occurred.</li><li>6. Celebrating safety awareness week.</li></ol>	



	<ol style="list-style-type: none"><li>7. Formation of safety committees.</li><li>8. Publication of articles related to safety.</li><li>9. Essay competition, picture competition, slogan competition related to industrial safety.</li></ol>	
d)	<p>State different mechanical causes of accident in industry</p> <p>Common causes of mechanical accidents: Mechanical accident means accidents that relate to machine operation or collapse of machine. These include cranes, powered industrial trucks, abrasive wheel and so on. Some common causes of mechanical accidents are shown below:</p> <ol style="list-style-type: none"><li>1. Injuries can result from elements of the workplace or components of machinery are thrown out during the operation of the machine, for example, sparks, chips and broken components</li><li>2. Injuries can result from operator's contact with sharp or abrasive surfaces</li><li>3. Parts of the body such as limbs are being trapped between closing or passing motions of the machine</li><li>4. Wrong operation of crane or excavator to crash people</li><li>5. Collapse of crane</li></ol>	
e)	<p>State any four important welfare provisions in industry</p> <ol style="list-style-type: none"><li>1. Washing facilities</li><li>2. Sitting facilities</li><li>3. First Aid appliances</li><li>4. Canteen</li><li>5. Crèches</li><li>6. Shelters, rest-room and lunch –rooms</li><li>7. Welfare officers</li></ol>	04

**4 a) Attempt any three of the following:**

**i) What are the objectives of the inventory management?**

**Ans.** (Any 4 points)

04 marks

The main objective of inventory management is to maintain inventory at appropriate level to avoid excessive or shortage of inventory because both the cases are undesirable for business. Thus, management is faced with the following conflicting objectives:

1. To keep inventory at sufficiently high level to perform production and sales activities smoothly.



2. To minimize investment in inventory at minimum level to maximize profitability.

Other objectives of inventory management are explained as under:-

3. To ensure that the supply of raw material & finished goods will remain continuous so that production process is not halted and demands of customers are duly met.
4. To minimize carrying cost of inventory.
5. To keep investment in inventory at optimum level.
6. To reduce the losses of theft, obsolescence & wastage etc.
7. To make arrangement for sale of slow moving items.
8. To minimize inventory ordering costs.

**ii) State any four important objectives of financial management.** 04 marks

**Ans.** The financial management is generally concerned with procurement, allocation and control of financial resources of a concern. The objectives can be-

1. To ensure regular and adequate supply of funds to the concern.
2. To ensure adequate returns to the shareholders which will depend upon the earning capacity, market price of the share, expectations of the shareholders.
3. To ensure optimum funds utilization. Once the funds are procured, they should be utilized in maximum possible way at least cost.
4. To ensure safety on investment, i.e., funds should be invested in safe ventures so that adequate rate of return can be achieved.
5. To plan a sound capital structure-There should be sound and fair composition of capital so that a balance is maintained between debt and equity capital.

**iii) Explain production budget.** 04 marks

**Ans.** (Any 4 points)

- A production budget may be prepared by production manager in consultation with his assistants after receiving the sales budget.
- A production budget shows the quantity of products to be manufactured. It is based upon: Sales budget, Factory capacity, budgeted stock requirements, Economic lot size and availability of raw material and labour etc.
- A production budget finds the cost of producing the estimated volume of salable products.
- A production plan is calculated in terms of the number of units to be produced in each period, say a month.
- As far as possible, the production should be planned at a relatively even rate, even though the sales budget indicates a high seasonal sales forecast.
- Production budget is a part of manufacturing budget. Manufacturing budget helps management in keeping production at an even level and in controlling the use of labour, material, equipment etc.
- Production budget may be compiled on departmental basis.

A.B.C. Co.						
<b>Production Budget</b>						
For the year ending.....						
	Units of Output					
	Jan	Feb	Mar	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
Department – X -Product-x	4000	4000	4000	13000	14000	15000
Department – Y -Product-y	2500	2500	3000	9000	9500	10000
<b>Total x + y</b>	<b>6500</b>	<b>6500</b>	<b>7000</b>	<b>22000</b>	<b>23500</b>	<b>25000</b>

**iv) What are different types of direct taxes in India?** 04 marks

**Ans.** (direct tax – 2 marks, types – 2 Marks)



- It is the tax imposed directly on tax payer and paid directly to the government by the person on whom it is imposed. It cannot be shifted by the taxpayer to someone else.
- A Direct tax is a kind of charge, which is imposed directly on the taxpayer.
- Some of the direct taxes are:
  - Income tax,
  - Corporation tax,
  - Property tax,
  - Inheritance tax and
  - Gift tax etc.
- Income Tax Act, 1961 imposes tax on income of individuals, firms, co-op societies and trusts, etc.
- Corporation tax is levied on companies on the income from their business transactions.
- Property tax is imposed on building or apartment owners.
- Inheritance and gift tax also taken from its source.
- It is controlled by states and rules are formulated by local bodies

**b) Attempt any one of the following:**

**06**

**(i) State meaning of fixed and working capital. Also, state various sources of raising working capital.**

**Ans.** (2 marks for each point)

Fixed Capital:

- Fixed capital is associated with long term assets.
- When an industrial enterprise is started from the ground up it requires capital to make/purchase Land, Building, Equipment and machinery, Tools and Furniture etc.
- Assets of these types are used over and over again for a number of years and are commonly termed as fixed capital.

Working capital:

- Once fixed assets e.g. building, equipment, machinery etc. have been purchased the enterprise needs funds to meet its day to day needs and expenditures such as purchase of raw material and supplies, payment of employee, storage costs, transportation and shipping expenses, plant maintenance cost etc.
- Funds required to cover these costs are commonly called working capital.

Sources of raising working capital:

- Funds from business operations.
- Other income such as from dividends, transfer fees, donations, interest from investments made in other companies etc.
- Sale of non-current assets such as useless and obsolete plant and machinery.
- Long term borrowings.
- Issue of additional equity capital or preference share capital etc.

**(ii) Explain concept of JIT production system.**

**Ans.**

- Just in time (JIT) manufacturing is a production model in which items are created to meet demand, not created in surplus or in advance need.
- The purpose of JIT production is to avoid the waste associated with overproduction, waiting and excess inventory.
- Just in time (JIT) is a production strategy that strives to improve a business' return on investment by reducing in-process inventory and associated carrying costs.
- Just in time is a type of operations management approach which originated in Japan in the 1950s. It was adopted by Toyota and other Japanese manufacturing firms.



- JIT focuses on continuous improvement and can improve a manufacturing organization's return on investment, quality, and efficiency.
- JIT relies on other elements in the inventory chain as well.
- The philosophy of JIT is simple: the storage of unused inventory is a waste of resources.
- A surprising effect of JIT was that car factory response time fell to about a day. This improved customer satisfaction by providing vehicles within a day or two of the minimum economic shipping delay.

Main benefits of JIT include

- Reduced setup time
- The flow of goods from warehouse to shelves improves.
- Employees with multiple skills are used more efficiently etc.

**5. Attempt any TWO of the following:**

- a) State functions of purchase department. List down various steps in purchasing.

**Ans.** Following are the functions of purchase department: 04 marks

1. Keep records-indicating possible materials and their substitutes.
2. Maintain records of reliable sources of supply and prices of materials.
3. Review material specifications with an idea of simplifying and standardizing them.
4. Making contacts with right sources of supply.
5. Procure and analyze quotations.
6. Place and follow up purchase orders.
7. Maintain records of all purchases.
8. To make sure through inspection that right kind of material has been purchased.
9. To prepare purchasing budget.
10. To prepare and update list of materials required by different departments of the organization within a specified span of time etc.

Following are the steps in purchasing: 04 marks

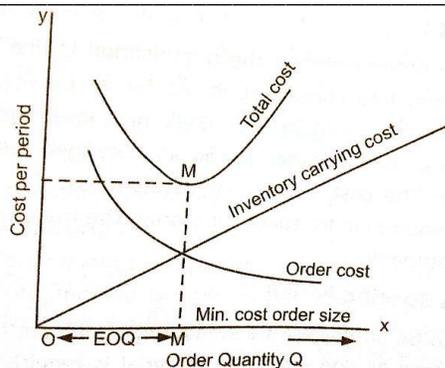
Recognition of need, receipt and analysis of purchase requisition.

1. Selection of possible potential sources of supply.
2. Making request for quotation.
3. Receipt and analysis of quotations.
4. Selection of right source of supply.
5. Issuing the purchase order.
6. Follow up and expediting the order.
7. Analyzing receiving reports and processing discrepancies and rejections.
8. Checking and approving vendors invoices for payment.
9. Closing completed orders.
10. Maintenance of records and files.

- b) **Define EOQ. How is it calculated? State advantages of using EOQ.**

**Ans.** 04 marks

- A problem which always remains is that how much material may be ordered at a time. An industry making bolts will definitely like to know the length of steel bars to be purchased at any one time. This length of steel bars is known as 'economic order quantity' and this EOQ is one which permits lowest cost per unit and is most advantageous.
- Before calculating economic order quantity it is necessary to become familiar with terms like maximum inventory, minimum inventory, standard order and reorder point, which are known as quantity standards.



- In above fig the procurement costs and inventory carrying costs have been plotted with respect to quantity in lot. Total cost is calculated by adding procurement cost and carrying cost. Total cost is minimum at the point M and thus M' represents the economic order quantity or economic lot size.
- Another method of finding EOQ that is by mathematical means is given below:
- Let Q is the Economic lot size, 04 marks  
C is the cost for one item,  
I is the cost of carrying inventory in percentage per period, including insurance, Obsolescence, taxes etc,  
P is the procurement cost associated with one order and  
U is total quantity used per period say annually.

$$Q = \sqrt{2U.P/C.I}$$

**c) Explain main provisions of Workman compensation act.**

**Ans.** The workmen's compensation act came into force in 1924. (Any 4 provisions)

The act was amended subsequently in 1933, 1938, 1939, 1946, 1958, and 1986.

Main Features of the act

- The worker can claim compensation if the injury has been caused by an accident in the course of the employment, provided he was not under the influence of drink or drug and the accident was not due to his willful disobedience of the rules.
- The amount of compensation depends upon the result of the injury and the nature of disablement.
- All fatal accidents are to be brought to the notice of the commissioner and the employer shall deposit the amount of compensation with him within 30 days.

Employer's liability for compensation

The employer is liable to compensate if:

- Injury has been caused by accident.
- During the course of employment.
- And has resulted in workman's death, permanent or temporary, total or partial disablement.

Distribution of Compensation

- Payment of compensation in respect of death of a workman or under legal disability shall be deposited by the employer with the commissioner. Employer should not make payment of compensation directly.
- An employer of course can give advance to any dependent on account of compensation not exceeding Rs. 100.

Notice and claim of accident

- A workman injured in an accident should first of all give in writing a notice of the accident to the employer.
- The purpose of giving notice is to enable the employer to check the facts of the accident and also to enable the workman to take steps to mitigate the consequences of the accident.

Medical examination

- An injured workman who has submitted a notice, shall present himself for the medical examination if the employer wants.
- Such an offer by the employer must be free of charge and within 3 days from the time at which service of notice has been affected.
- If the workman is not present for examination is right of compensation has been suspended.

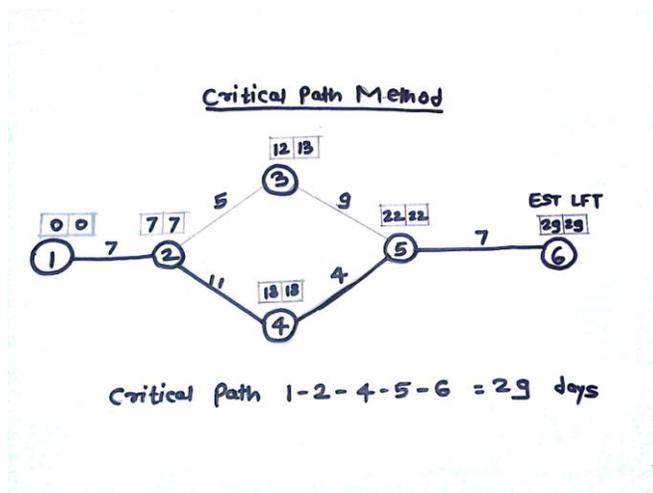
**6. Attempt any TWO of the following:**

a. A small engineering industry carries out six activities as shown below.

S.No.	Activity	Duration in Days
1	1-2	7
2	2-3	5
3	3-5	9
4	2-4	11
5	4-5	4
6	5-6	7

Draw the network diagram. Calculate EST, LST, EFT, LFT and floats. Find out critical path and project duration.

**Ans. (04 +04marks)**

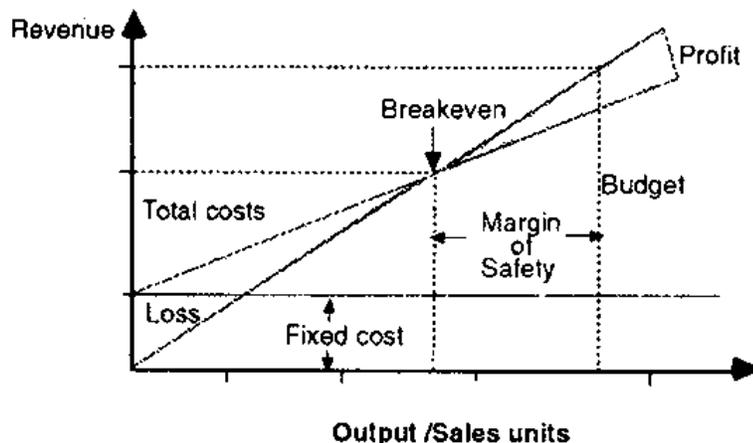


S.No.	Activity	Duration in Days	EST	LST (LFT-D)	EFT (EST+D)	LFT	Total Float	Remark
1	1-2	7	0	0	7	7	0	
2	2-3	5	7	8	12	13	1	
3	3-5	9	12	10	21	22	1	
4	2-4	11	7	11	18	18	0	
5	4-5	4	18	4	22	22	0	
6	5-6	7	22	7	29	29	0	

**b. Draw breakeven chart. Explain**

- (i) Breakeven point
- (ii) Margin of safety
- (iii) Angle of incidence

Ans. 02 marks



**Breakeven point:** 02 marks

- Revenue and cost can be studied by directing attention to total revenue and total cost. Breakeven analysis implies that at some point in the operations, total revenue equals total cost.
- Basically breakeven analysis is concerned with finding the point at which revenues and costs agree exactly hence it called breakeven point.
- The breakeven point is, therefore the volume of output at which neither a profit is made nor a loss is incurred.

**Margin of safety:** 02 marks

- Margin of safety can be presented on the breakeven chart as the distance between BEP and the output being produced.
- If this distance is large, it indicates that profits will be there even if there is a serious drop in production.
- If this distance is relatively small, it hints that profits will be reduced considerably even if there is a small drop in productive capacity or sales.

**Angle of incidence:** 02 marks

- This is the angle ( $\theta$ ) at which sales revenue line cuts the total costs line.
- A large angle indicates that profits are being made at a high rate.
- A large angle of incidence with a high margin of safety, mark the extremely favourable business position

**c. What is balance sheet? Draw its format. State important information that can be obtained from balance sheet.**

Ans. 04 marks

- A balance sheet is a statement showing the financial status of the company at any given time.
- A Balance sheet is a statement of assets, liabilities and capital at a specified date.
- In other words, the balance sheet shows a summary of the sources of the enterprise resources and of the investment of those resources in various assets.
- Balance sheet are prepared at least annually but may be done so more often and on specific occasions when the need exists in connection with making decisions concerning large project investments, dividend distribution etc.



04 marks

A.B.C. Co.			
Balance Sheet			
March 31, 1991			
LIABILITIES	Rs.	ASSETS	Rs.
<b>Current Liabilities:</b>		<b>Current Assets:</b>	
Creditors for expenses	.....	Cash in hand	.....
Trade Creditors	.....	Cash at bank	.....
Bills Payable	.....	Bills receivable	.....
Bank overdraft	.....	Debtors	.....
<b>Long-term Liabilities:</b>		Inventory	.....
Long-term loan	.....	<b>Investments:</b>	
Mortgage on property	.....	<b>Fixed Assets:</b>	
<b>Owner equity:</b>		Furniture and fittings	.....
Capital	.....	Plant and machinery	.....
Retained profits	.....	Building	.....
		Land	.....
		Goodwill	.....
	_____		_____