

210 8-11-23

13
Nov 23

SCHEME OF VALUATION

(Scoring Indicators)

| Revision (2015) | | Course Code 5001 | | |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------|-------|
| Course Title : INDUSTRIAL MANAGEMENT AND SAFETY | | | | |
| Qt No | Scoring Indicator | Split Up Scor e | Su b Tot al | Total |
| I | | | | |
| 1 | . The term incentive means an inducement which rouses or stimulates one to action in a desired direction. An incentive has a motivational power. | 2 | 2 | 10 |
| 2 | 1. Durability 2. Suitability 3. Dependability 4. Reliability 5. Affordability 6. Value of money. - Write any two of the following | 1-1 | 2 | |
| 3 | Slack: It is the difference between LFT and EFT. In critical path slack or float will be zero. EFT (Earliest finish time): This is the earliest possible time at which an activity can finish. This is represented on the top right corner outside operation in a rectangle. | 1-1 | 2 | |
| 4 | 1. Improper safety wearing 2. Operating equipment without authority. 3. Severity of work 4. Excessive speed. 5. Long working hours. 6. Drugs. 7. Improper loading or unloading – List any two of the following | 1-1 | 2 | |
| 5 | DSIR - Department of Scientific and Industrial Research MSME - Micro small and medium enterprise | 1-1 | 2 | |
| II | PART B | | | |
| 1. | Methods of Training Training is generally imparted in two ways: On the job training- On the job training methods are those which are given to the employees within the everyday working of a concern. It is a simple and cost-effective training method. The in | | | |

| | | | | |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---|--------|
| | <p>proficient as well as semi- proficient employees can be well trained by using such training method. The employees are trained in actual working scenario. The motto of such training is “learning by doing.” Instances of such on-job training methods are job-rotation, coaching, temporary promotions, etc.</p> <p>Apprentice training: Trainee attends theory & practical classes from all the departments, under the supervision of a supervisor. He gets a small stipend for the same.</p> <p>Vestibule school training The trainee undergoes a training session in a miniature version of the real case factory, with basic types of machines and factory environment. It consumes a lot of investment for setting up the miniature version. As the production is not actual, worries about wastage, damage etc. are eliminated.</p> <p>Training by skilled, experienced and old worker: The new worker works along with the guidance of an experienced hand, and this helps to impart necessary skills from the trainer.</p> | 1.5 * 4 | 6 | |
| 2 | <p>Incentives may be classified as:</p> <p>Financial Incentives: Money is an important motivator. Common uses of money as incentive are in the form of wages and salaries, bonus, retirement benefits, medical reimbursement, etc</p> <p>Nonfinancial Incentives: Once money satisfies his/her physiological and security needs, it ceases to be a motivating force. Then, higher order needs for status and recognition and ego in the society emerge. It may take in the form of,</p> <ul style="list-style-type: none"> • Appreciation of Work Done • Group Incentives • Knowledge of the Results • Worker’s Participation in Management • Opportunity for Growth • Job Enrichment <p>Semi financial Incentives: This is the combination of financial and nonfinancial incentives. This may include the following,</p> <ul style="list-style-type: none"> • Canteen facility at a subsidized rate • Pension and other benefits • Conveyance facility at concession rate. | 2-2- 2 | 6 | |
| 3 | <p>ISO 9000 Installation Steps</p> <p>1. Preparatory step :</p> <ul style="list-style-type: none"> • Conduct awareness program to top level management. • Set up implementation committee • Start ISO awareness program • Find current status and prepare action plan | | | 6x5=30 |

| | <ul style="list-style-type: none"> • Develop organizational structure • Develop Quality system <p>2. Implementation step</p> <ul style="list-style-type: none"> • Implement the documented quality system • Establish internal quality audit • Monitor and stabilize quality system • Conduct preregistration internal audit <p>3. Registering and certificate step</p> <ul style="list-style-type: none"> • Apply for registration • Audit by certification body • Compliance audit • Certification | 2-2-2 | 6 | | | | | | | | | | | | | | | | | | | | | | |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------|-----|---|-------------------------------------------------------------------|-------------------------------------------------------|---|----------------------|--------------------------|---|--------------------------|-----------------------------|---|-----------------------------------|-----------------------------------------------------------------------------------------------|---|-------------------------------------------|---------------------------------------|---|-------------------------------------------------------|-----------------------------------------|-----|---|--|
| 4 | <ol style="list-style-type: none"> 1. Issuing purchase requisitions to Purchase Department as and when necessity for materials in stores arises. 2. Receiving purchased materials from the purchase department and to confirm their quality and quantity with the purchase order. 3. Storing and preserving materials at proper and convenient places so that items could be easily located. 4. Storing the materials in such a manner so as to minimise the occurrence of risks and to prevent losses due to defective storage handling. 5. Issuing materials to various departments against material requisition slips duly authorized by the respective departmental heads. 6. Undertaking a proper system of inventory control, taking up physical inventory of all stores at periodical intervals and also to maintain proper records of inventory. | 1 x 6 | 6 | | | | | | | | | | | | | | | | | | | | | | |
| 5 | <table border="1" data-bbox="343 1288 1029 1859"> <thead> <tr> <th>Sl. No.</th> <th>PERT</th> <th>CPM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>It is a probabilistic model with uncertainty in activity duration</td> <td>A deterministic model with well known activity timing</td> </tr> <tr> <td>2</td> <td>Has 3 time estimaste</td> <td>Has only 1 time estimate</td> </tr> <tr> <td>3</td> <td>Event oriented technique</td> <td>Activity oriented technique</td> </tr> <tr> <td>4</td> <td>Suitable in defence, R&D Projects</td> <td>Suitable for civil, construction work, mechanical works, scheduling of paint maintenance etc.</td> </tr> <tr> <td>5</td> <td>Does not give importance to critical path</td> <td>Gives due importance to critical path</td> </tr> <tr> <td>6</td> <td>It uses statistical method to calculate expected time</td> <td>Need not require statistical techniques</td> </tr> </tbody> </table> | Sl. No. | PERT | CPM | 1 | It is a probabilistic model with uncertainty in activity duration | A deterministic model with well known activity timing | 2 | Has 3 time estimaste | Has only 1 time estimate | 3 | Event oriented technique | Activity oriented technique | 4 | Suitable in defence, R&D Projects | Suitable for civil, construction work, mechanical works, scheduling of paint maintenance etc. | 5 | Does not give importance to critical path | Gives due importance to critical path | 6 | It uses statistical method to calculate expected time | Need not require statistical techniques | 3+3 | 6 | |
| Sl. No. | PERT | CPM | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | It is a probabilistic model with uncertainty in activity duration | A deterministic model with well known activity timing | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Has 3 time estimaste | Has only 1 time estimate | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Event oriented technique | Activity oriented technique | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Suitable in defence, R&D Projects | Suitable for civil, construction work, mechanical works, scheduling of paint maintenance etc. | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Does not give importance to critical path | Gives due importance to critical path | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | It uses statistical method to calculate expected time | Need not require statistical techniques | | | | | | | | | | | | | | | | | | | | | | | |

6

Solution

| | Player B | | | Row min |
|----------|----------|----|---|---------|
| Player A | 40 | 9 | 2 | 2 |
| | 30 | 15 | 7 | 7 |
| | 10 | 5 | 4 | 4 |
| Col. Max | 40 | 15 | 7 | |

Max Min = Max of Row minimum = 7

Mini Max = Min of Column Max = 7

The matrix has a saddle point at position (A_2, B_3)

The optimum strategy for player A is A_2

The optimum strategy for player B is B_3

So the value of the game is $(A_2, B_3) = 7$

Player A gets 7 where player B loses 7 points or rupees.

So the winner of the game is player A.

... following game

6

6

7

Role of Safety officer

1. The Safety Officer is responsible for monitoring and assessing hazardous and unsafe situations.
2. Developing measures to assure personnel safety.
3. Correct unsafe acts or conditions through the regular line of authority.
4. May exercise emergency authority to prevent or stop unsafe acts when immediate action is required.
5. The Safety Officer maintains awareness of active and developing situations.
6. Ensures there are safety messages in each Incident Action Plan.
7. Participate in planning meetings to identify any health and safety concerns inherent in the operations daily work-plan.
8. Review the Incident Action Plan for safety implications.
9. Investigate accidents that have occurred within incident areas.
10. Ensure preparation and implementation of Site Safety and Health Plan

1x6

6

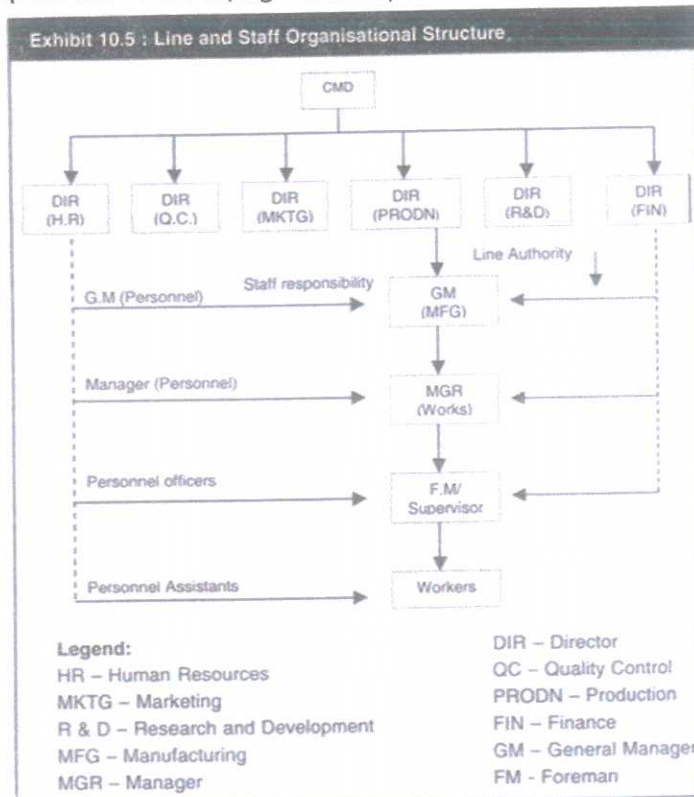
| | | | | |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------|-----------|
| <p>III (i)</p> | <p style="text-align: center;">PART C MODULE 1</p> <p>Functions of management 1. Planning 2. Organizing 3. Staffing 4. Directing 5. Controlling</p> <p>Planning: Planning is determination of courses of action to achieve desired goals.</p> <p>Organizing: Organizing process of bringing together physical, financial and human resources and developing productive relationship amongst them for achievement of organizational goals.</p> <p>Staffing: Managerial function of staffing involves manning the organization structure through proper and effective selection; appraisal & development of personnel to fill the roles designed in the structure.</p> <p>Directing: Direction is that inert-personnel aspect of management which deals directly with influencing, guiding, supervising, motivating sub-ordinate for the achievement of organizational goals.</p> <p>Controlling: Controlling is the measurement & correction of performance activities of subordinates in order to make sure that the enterprise objectives and plans desired to obtain them as being accomplished</p> | <p>1.5 for defe nitio n and 1.5* 5 for each func tion</p> | <p>9</p> | <p>15</p> |
| <p>III (ii)</p> | <p>Labor Turnover: The ratio of the number of employees that leave a company through attrition, dismissal, or resignation during a period to the number of employees on payroll during the same period.</p> <p>Causes of labor Turnover:</p> <ul style="list-style-type: none"> • Lower wages; • Bad working conditions; • Unsympathetic attitude of the management; • Bitter relationship between management and workers; <p>Lack of conveyance, accommodation, medical and educational facilities and recreational amenities etc</p> | <p>2 4</p> | <p>6</p> | |
| <p>IV (i)</p> | <p>Fayol presented 14 principles of management.</p> <p>Division of work: According to this principle, work should be divided among individuals and groups according to their skills and knowledge. This helps in completing the work with greater efficiency.</p> <p>Authority and responsibility: Authority is a right of an individual to give orders and instructions. Responsibility is a state of being accountable for the consequences of the decisions taken by an individual.</p> | <p>9 Mar ks for atlea st 12</p> | <p>9</p> | |

| | | | |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| <p>IV (ii)</p> | <p>Discipline: Discipline in an organisation refers to the obedience to authority. Employees must obey and respect the governing policies and rules of the organisation.</p> <p>Unity of command: According to this principle, employees associated with a particular type of work should report to one superior only. This helps in avoiding confusions in the role of the employees.</p> <p>Unity of direction: It means that there should be one direction in which employees must move to achieve a particular objective. If employees get pulled into different directions, it may be difficult for them to achieve the objective.</p> <p>Subordination of individual interest to general interest: In this principle, Fayol laid emphasis on aligning individuals' personal goals to organisational goals.</p> <p>Remuneration: There should be provision of fair wages for workers. The calculation of wages should be done by considering various factors, such as business environment, cost of living, capacity of organisation to pay, and productivity of employees.</p> <p>Centralization: According to Fayol, the degree of centralisation should be decided to make the optimum utilisation of employees' skills.</p> <p>Scalar chain: Scalar chain refers to the hierarchy followed in an organisation from top managers to employees working at lower levels. In scalar chain, all communication should pass through proper channels of hierarchy.</p> <p>Order: Order is required for the efficient coordination of all the elements in an organisation. Management must follow the principle of the right place for everything and every man.</p> <p>Equity: The principle of equity means fair treatment of all employees. Management must treat all employees equally and should be free from biases and prejudices.</p> <p>Stability of tenure of personnel: Management must strive to stabilise the tenure of employees by providing them job security. Increased turnover always results in inefficient production; therefore, organisations must attempt to reduce it by improving employee morale and motivation.</p> <p>Initiation: Management must provide freedom to employees so that they can carry out orders effectively. Employees should be encouraged to take initiatives in their respective fields in order to perform their jobs efficiently.</p> <p>Espirit Decorps: It refers to team spirit. Management must adopt new ways to improve team spirit among employees. This helps employees to work in harmony.</p> <p>Line and Staff Organisational Structure: Most large organisations belong to this type of organisational structure. These organisations have direct, vertical relationships between different levels and also specialists responsible for advising and assisting line managers. Such organisations have both line and staff</p> | <p>points</p> | <p>6</p> |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|

departments. Staff departments provide line people with advice and assistance in specialized areas (for example, quality control advising production department). Three types of specialized staffs can be identified Advising, Service and Control

3 for definition & 3 for figure

(Explanation – 2 marks; Fig – 4 Marks)



V
(i)

4.13 BENEFITS OF AN ISO 9001:2000 COMPANY

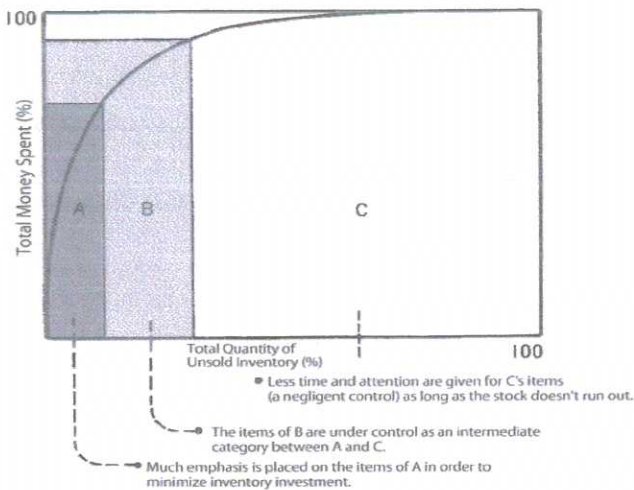
1. Countries affiliated to European Free Trade Association (EFTA) made it as mandatory to have bilateral trade with only those parties which have ISO 9001 certification.
2. If the Indian industry adapts the ISO 9001 Quality system, it will get entry into the global market and can compete with the developed countries because Indian products are much cheaper compared to European products. In short Quality system certification is a credibility passport to entry global market.
3. It builds customer satisfaction by supplying assured quality products at reasonable price.
4. The government of India in its Export import policy has given certain concessions to the ISO 9001 companies.
5. It motivates the employees and develop pride in them for achieving excellence in their operations.
6. These Quality systems improve the efficiency and reduce the wastages and inspection and also rework.
7. It enhance the Quality image of the company in the eyes of the national public and gives credit in the competition market.
8. Systematic operations and processes reduce the work hazards and get more time for further developmental activities.
9. In some countries a company without ISO 9001 has to pay more insurance premium. In some countries they denied the insurance coverage.
10. ISO 9001 build committed, motivated work force with team spirit.

1*7

7

ABC (Always better control) MODEL

V
(ii)



4 for figure and 4 for explanation

8

In this model material is classified into three class A class B and class C.

Class A: It consists 10 % of the total no of items and 70 % of the total money value for all the items.

High value item, high control and security is required.

Class B: It consists 20 % of the total no of items and 20 % of the

total money value for all the items.
 It's between Class A and Class C moderately control materials.
Class C: It consists 70 % of the total no of items and 10 % of the total money value for all the items.
 It consist low value material.

VI
 (i)

Ten "manthras" of TQM.

1. Quality is through continuous involvement and effort.
2. Quality involves hard work and devotion
3. Quality is everybody's business
4. Quality begins cleanliness
5. Take quality and quality will take care everything
6. Make it right for first time
7. Quality is achieved through team work.
8. Document is dependable.
9. Quality is end and begins with education
10. Quality used to evaluate product and services.

8
 Mar
 ks
 for
 10
 poin
 ts

8

VI
 (ii)

The functions of sales department

1. Analyze market
2. Study consumer habits and taste.
3. Study about competitor.
4. Sales research and planning.
5. Demand creation.
6. Advertising
7. Decide distribution network and policy.
8. Sales costs and budget.
9. Price fixations.
10. Development of products.

1*7

7

VII
 (i)

| Plants | P | Q | R | S | Required |
|-----------------|------|------|------|-----|----------|
| 1 | 10 6 | 5 | 12 | 11 | 10 |
| 2 | 1 9 | 8 3 | 6 | 4 | 9 |
| 3 | 11 | 2 14 | 5 12 | 11 | 7 |
| 4 | 7 | 9 | 2 6 | 9 8 | 11 |
| Total Available | 11 | 10 | 7 | 9 | 37 |

Total transportation cost =
 $= 10 \times 6 + 1 \times 9 + 8 \times 3 + 2 \times 14 + 5 \times 12$
 $+ 2 \times 6 + 9 \times 8$
 $= \underline{265}$

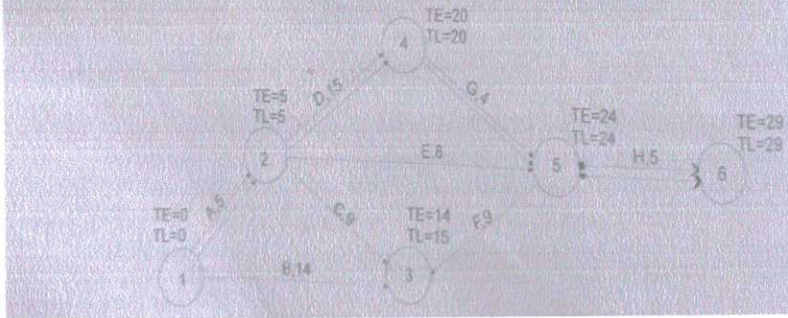
5-1-
 1

7

VII
(ii)

| Activity | A | B | C | D | E | F | G | H |
|----------|---|----|---|----|---|---|---|---|
| te | 5 | 14 | 9 | 15 | 8 | 9 | 4 | 5 |

Fig 6.31 shows the network diagram



Critical path = 1-2-4-5-6
Project duration = 29 units of time

4
mar
ks
for
netw
ork
and
4
mar
ks
for
calc
ulati
on
and
ans
wer

8

VIII
(i)

Table 7.1 showing available machine capabilities and machine hour requirements of the two products.

Solution:

Let X_1 = No. of units of A produced

X_2 = No. of units of B produced

X_1 and X_2 are called the decision variables

Objective function.

Maximise $50 X_1 + 60 X_2$

Constraints corresponding to machine 1.

$$2X_1 + X_2 \leq 300$$

(because one tonne of product A requires 2 hours of processing in machine 1 while the corresponding requirement of B is 1 hour.)

Similarly, the constraints relating to machine 2 and machine 3 are

$$3x_1 + 4x_2 \leq 509$$

$$4x_1 + 7x_2 \leq 812$$

3
mar
ks
for
obje
ctive
func
tion
4

7

ks
for
cons
train
ts

In addition there cannot be any negative production which may expressed as $X_1 \geq 0$
 $X_2 \geq 0$.

Thus the decision variables, the objective function and the constraints of the products mix problem have been identified. The problem can now be stated in the standard linear programming form is:

$$\text{Maximise } Z = 50X_1 + 60X_2$$

Subjected to

$$2X_1 + X_2 \leq 300$$

$$3X_1 + 4X_2 \leq 509$$

$$4X_1 + 7X_2 \leq 812$$

$$X_1 \geq 0, X_2 \geq 0$$

VIII
(ii)

| PLANTS | A | B | C | D | Availability | |
|--------|-------|-------|-------|-------|--------------|---------|
| 1 | 10 | 9 | 7 | 11 | 10 | 9-7=2 |
| 2 | 8 | 6 | 9 | 7 | 8 | 7-6=1 |
| 3 | 11 | 12 | 14 | 11 | 7 | 12-11=1 |
| 4 | 4(9) | 6 | 3 | 9 | 9(0) | 4-3=1 |
| Total | 34(2) | 12 | 5 | 6 | | |
| | 5-4=1 | 9-6=3 | 7-3=4 | 9-7=2 | | |

| PLANTS | A | B | C | D | Avail | |
|--------|----|----|----|------|-------|---|
| 1 | 10 | 9 | 7 | 11 | 10 | 2 |
| 2 | 8 | 6 | 9 | 7 | 8 | 1 |
| 3 | 11 | 12 | 14 | 11 | 7 | 1 |
| Total | 2 | 12 | 5 | 6(0) | | |
| | 2 | 3 | 2 | 1 | | |

Step 3

| PLANTS | A | B | C | Avail | |
|--------|----|--------|----|-------|---|
| 1 | 10 | 9 | 7 | 10 | 2 |
| 2 | 8 | 6(2) | 9 | 2(0) | 2 |
| 3 | 11 | 12 | 14 | 7 | 1 |
| Total | 2 | 12(10) | 5 | | |
| | 2 | 3 | 2 | | |

Step 4

| PLANTS | A | B | C | Avail | |
|--------|----|----|------|-------|---|
| 1 | 10 | 9 | 7(5) | 10(5) | 2 |
| 3 | 11 | 12 | 14 | 7 | 1 |
| Total | 2 | 10 | 6(0) | | |
| | 1 | 3 | 1 | | |

Step 5

| PLANTS | A | B | Avail | |
|--------|-------|-------|-------|---|
| 1 | 10 | 9(5) | 6(0) | 1 |
| 3 | 11(2) | 12(5) | 7 | 1 |
| Total | 2 | 10(5) | | |
| | 1 | 3 | | |

$$\text{Total transportation cost} = 9 \times 4 + 6 \times 7 + 2 \times 6 + 5 \times 7 + 5 \times 9 + 2 \times 11 + 5 \times 12 = \text{Rs. } 252/-$$

2*4

8

IX
(i)

4 E's of accident prevention technique

1. Engineering
2. Education
3. Enterprising

8

| | | | | |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---|--|
| | <p>Engineering Methods: This involves using of proper machine tools, proper transport use protective devices, alarm system, evacuation plan in case of fire etc.</p> <p>Education: Educate employees to practices to be followed to ensure safety. I can be done through induction, training, using proper supervisor, forming safety committees etc.</p> <p>Enterprising: It's developing safety consciousness to the workers and management. By providing prizes for keeping zero accidents, Cross mark all accident area, safety postures, safety training, lectures etc.</p> <p>Enforcement: It's forcing everyone to follow the rules. Everyone should be contributed to get ensure safety</p> | 8 marks for briefing each points | | |
| IX (ii) | <p>The different factors contributing to the failure of entrepreneurial ventures</p> <ol style="list-style-type: none"> 1. Poor management 2. Production problem 3. High fixed cost 4. Marketing production problem 5. Financial problem | 7 | 7 | |
| X (i) | <p>The steps involved in starting small-scale industry</p> <ol style="list-style-type: none"> 1. Decide the product through survey, using knowledge skill etc. 2. Prepare project report. 3. Decide type of ownership 4. Decide factory location. 5. Buy land or rent a place. 6. Invite quotation for machinery and equipment. 7. Apply for registration 8. Plan finance 9. Apply loan and follow-up. 10. Place order for machinery. 11. Apply for power 12. Plan layout of machinery. 13. Apply for tax card. 14. Apply for raw material. 15. Recruit more staff. 16. Conduct trail. 17. Decide pricing and marketing 18. Maintain account <p>Concentrate on production and sales.</p> | 8 marks | 8 | |

| | | | | |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------|--|
| <p>X (ii)</p> | <ul style="list-style-type: none"> ➤ Introduced to ensure safety at work place as well as to promote health and welfare of workers. ➤ It covers factories using power and employing 10+ workers, factories not using power and employing 20+ workers or factories specially notified under section 85 of the Factories act by state government/ union territories. ➤ Relevant provisions are <ul style="list-style-type: none"> ● 1. Licensing and registration ● 2. Health ● 3. Safety ● 4. Welfare ● 5. Hours of work ● 6. Employment of young persons ● 7. Leave (briefly describe the above 7 points in one or two sentences) | <p>2-2-3</p> | <p>7 ma rks</p> | |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------|--|