DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, APRIL-2022

INDUSTRIAL MANAGEMENT AND SAFETY

[Maximum marks: 100]   (Time: 3 Hours)

PART – A
Maximum marks : 10

I (Answer *all* the questions in one or two sentences. Each question carries 2 marks)

1. Define "Labour turn over".

2. State the concept of "Slack" in network diagram.

3. Define Economic Order Quantity.

4. List any two applications of PERT.

5. Define "Accident proneness".   (5 x 2 = 10)

PART – B
Maximum marks : 30

II (Answer any *five* of the following questions. Each question carries 6 marks)

1. List any six objectives of training.

2. Write short note on Public Ltd. companies.

3. Explain the concept of ABC inventory model.

4. Discuss the role of safety officer in industries.

5. Explain the need for safety measures in industries.

6. List the dimensions of quality.

7. A company produces two products A and B. In the company, there are mixing and grinding departments through which the products A and B are processed. The capacity of mixing department is 54 hours a week and the capacity of grinding department is 66 hours a week. The processing of one unit of product A requires 3 hours in mixing and 6 hours in grinding. The processing of one unit of product B requires 6 hours in mixing and 3 hours in grinding. If the profit from one unit of A is Rs.4 and one unit of B is Rs.6, formulate the LPP for maximizing the profit.   (5 x 6= 30)

PART – C

Maximum marks : 60

(Answer one full question from each unit. Each full question carries 15 marks)

UNIT –I

III. (a) Explain the functions of management. (9)

   (b) Outline the importance of HRM. (6)

OR

IV. (a) Explain different types of organizational structure. (9)

   (b) Discuss the importance of good wage plan. (6)

UNIT-II

V. (a) List the steps for installation of ISO 9000. (9)

   (b) Discuss the objectives of quality audit. (6)

OR

VI. (a) List the functions of sales department. (9)

   (b) Explain the functions of store keeping. (6)

UNIT-III

VII. (a) A project consists of eight activities of which dependency and time estimates of each activity is given in the following table. Construct network diagram, mark critical path and calculate the project duration. (9)

Activity	Dependency	Optimistic time	Most likely time	Pessimistic time
A	NONE	9	12	15
B	NONE	3	5	13
C	B	4	6	14
D	B	2	10	12
E	B	11	14	23
F	A,D	8	9	16
G	C	8	10	12
H	E,F,G	4	6	20

   (b) Write any four difference between CPM and PERT. (6)

OR

VIII.(a) Compute the initial feasible solution of transportation problem using Least cost method. (9)

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	SHOP 1	SHOP 2	SHOP 3	SHOP 4	SUPPLY
FACTORY 1	2	4	6	8	40
FACTORY 2	4	5	3	7	70
FACTORY 3	5	8	4	6	40
DEMAND	20	30	50	50	

(b) Solve the given pay off matrix of the game (6)

Player B

$$\text{Player A} \quad \begin{bmatrix} 3 & 2 & 4 \\ -2 & 1 & -3 \\ 0 & -2 & 3 \end{bmatrix}$$

UNIT-IV

IX. (a) Explain the 4 E's of accident prevention technique. (9)

(b) Describe the procedure for the registration of SSI. (6)

OR

X. (a) Discuss the precautions to be observed in preventing accident while working in hazardous environment. (9)

(b) List the environmental factors which causes accidents in industries. (6)

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