

FIFTH SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—MARCH, 2013

INDUSTRIAL MANAGEMENT AND SAFETY

(Common to all branches except CE, DCP, QS & CM, AR and CB)

[Time : 3 hours

(Maximum marks : 100)

Marks

PART—A

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

1. What is scientific management ?
2. State the philosophy of TQM.
3. Differentiate between activity and event.
4. Define an accident.
5. What is 'smog' ?

(5x2=10)

PART—B

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

1. List the contributions of F W Taylor towards scientific management.
2. Write down the functions of human resource management.
3. List the benefits of an ISO-9000 company.
4. The annual requirement of an item for a production schedule is 12,000 units. No safety stock is kept. Ordering cost is ₹ 9. Carry cost is ₹ 4 per unit per year. What is EOQ if the lead time is 5 days and the firm works 300 days in a year, find the re-order level.
5. Write down the stages in the solution of transportation problem using Vogels approximation method.
6. Solve the following game using Maxi-Mini and Mini-Max principle and find the saddle point, best strategy for both players and the value of the game.

	Player A		
	2	5	-3
Player B	5	8	2
	6	5	4

7. List the mechanical factors causing accidents.

(5x6=30)

PART—C

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

UNIT – I

- III (a) List and explain any six principles of management. 9
 (b) Explain Halsey's incentive plans. 6

OR

- IV (a) Describe the method of formation of a co-operative society. 9
 (b) List the advantages of training. 6

UNIT – II

- V (a) Write down the purchase procedure. 6
 (b) Explain organisational mission, vision and quality policy. 9

OR

- VI (a) List and explain the different elements of ISO-9000. 9
 (b) What is a bin card ? Explain. 6

UNIT – III

- VII (a) Write short notes on :
 (i) Activity (ii) Earliest finish time (iii) Latest finish time. 6
 (b) A company manufactures and sells two products A and B. They require the use of 3 different raw materials X, Y, Z and are available in limited quantities. The profit per unit of product A and B is 4 and 3 units of money respectively. Formulate a linear programming problem to maximize the profit. The other details are given below :

Raw material	Units of raw material for making one unit of product		Total units of raw material available
	A	B	
X	2	4	24
Y	3	2	16
Z	4	2	22

9

OR

- VIII (a) Draw the network diagram for the project, in which the details are given below. Find the duration of the project and mark the critical path. Use AOA method.

Activity	Dependency	Duration (days)	
A	--	4	
B	A	5	
C	A	3	
D	C	2	
E	B	8	
F	E&D	7	
G	F	3	
H	C	2	
I	G&H	5	10
(b) List the different stages in operations research solution.			5

UNIT - IV

- IX (a) List the precautions to be observed while working in a hazardous environment. 6
 (b) Explain the steps adopted for controlling the air pollution. 9

OR

- X (a) Write down the effects of different pollutants on human being. 6
 (b) Discuss the role of management in organizing safety. 9
-