Code No:158BF

R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech IV Year II Semester Examinations, July - 2023
INDUSTRIAL MANAGEMENT
(Mechanical Engineering)

Time: 3 Hours **Max. Marks: 75**

Note: i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a)	State the salient features of Herzberg's Two-Factor Theory of Motivation.	[2]
b)	What are the essential qualities required for good management?	[3]
c)	Tell why boundary less organization is so successful?	[2]
d)	What is departmentation? How is it essential for management?	[3]
e)	Distinguish between Rural and Urban layouts.	[2]
f)	Write a small note on "Fast Diagram"	[3]
g)	Define Work - Study.	[2]
h)	State the merits of double sampling plans.	[3]
i)	List the benefits of job evaluation.	[2]
j)	What is the project crashing?	[3]

PART – B

(50 Marks)

2.a)	Explain briefly the Fayol's principles of management.	
b)	Write a note on "Maslow's Theory of Human Needs''.	[5+5]
	OR	
3.a)	Discuss the contributions of Taylor to the theory of management .	
b)	Do you think the management must have social responsibilities? If so Why? Justify your answer.	[5+5]
4.a)	Briefly explain about the different types of organization structures.	
b)	Suppose you are working as a manager in a MNC which produces pharmaceutical products? Which type of organization did you choose? Why?	[5+5]
	OR	
5.a)	How does line and staff organization structure differ from pure line organization structure? What are the benefits and limitations of line and staff organization structure?	
b)	What do you know about Inverted pyramid structure in an organization? How does it help?	[5+5]
6.a)	Describe and explain the various types of plant layouts.	
b)	What type of layout do you think might be appropriate for the manufacture of the V- belt pulley, discuss.	[5+5]
	OR	
7.a)	What is value analysis? Explain in detail.	
b)	Explain features, advantages, limitations and suitability of following layouts: i) Product layout ii) Process layout.	[5+5]

8.a) A time study was made of an operator. The average observed time after discounting non normal occurrences was 0.8 minute per unit. The operator performance was judged to be 85 and the allowances for this type of work total 11 percent. What is the normal time and standard time for this job?

b) Explain working principle of double sampling plan with a flow chart. [5+5]

OR

9.a) The following table gives the number of defects in a casting used for making part of a diesel engine.

Casting No	1	2	3	4	5	6	7	8	9	10
Number of defects (c)	10	20	15	25	13	7	6	4	12	10

Construct a C-chart with 3 sigma limits and comment on the casting process.

b) Suppose an organization utilizes a variable based measurement system for process control. During a period, it was found that while all the plotted observations with in the control limits in the X bar chart, on point was lying outside the control limits in the R chart. What should the organization do in this case? [5+5]

10.a) Differentiate between CPM and PERT analysis

b) The following represents a project that should be scheduled using PERT.

Activity	Immediate predecessor	Optimistic time	most likely time	Pessimistic time
a	-	9	11	14
b	a	5	6	10
b	b	7	10	12
c	a,b	1	2	3

i) Draw the network.

ii) What is critical path & the expected project completion time?

iii) What is the probability of completing this project within 35 days? [5+5]

OR

11.a) "Projects involve direct as well indirect costs and project managers need to use this information in project management". Comment on this statement

b) A job has been subdivided into 5 elements. The time for each element and respective ratings are given below: Calculate the normal time and standard time for each element and for the job if allowance is 4%. [3+7]

Element No	Observed Time	Rating Factor (%)
1	0.6	100
2	1	80
3	1.1	130
4	1.2	110
5	1.5	90

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