Code No: 156DV **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year II Semester Examinations, March - 2024
INDUSTRIAL MANAGEMENT
(Common to CE, EEE, ME, ECE, CSE, IT, MIE, CSE(CS), CSE(AI&ML), CSE(DS))

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) Define industry and industrial management. [2]
b) Which leadership style is suitable to HR Manager of I.T. industry in the present era? [3]
c) What is the advantage of Matrix structure? [2]
d) Identify three types of attitudes in the choice of organizational structure. [3]
e) What is operations management? [2]
f) Define Productivity. List the various factors affecting productivity. [3]
g) Explain objectives of work study. [2]
h) What is the difference between X-bar chart and R-chart and how they are used? [3]
i) Who comprise the job evaluation committee? Mention any two features of job evaluation. [2]
j) Discuss the guidelines for construction of the project network. [3]

PART – B

(50 Marks)

2.a) Discuss various aspects of scientific management.
b) Explicate the Henry Fayol's principles of management with examples. [5+5]

OR

3.a) Explain the scope of management in an entrepreneurship and organization.
b) What are different theories of motivation? Explain any one in detail. [5+5]

4.a) How the organization structure is formed? Differentiate between line and staff organization.
b) Describe various bases for departmentation and suggest a scheme of departmentation for a large marketing company with a field network all over the country. [5+5]

OR

5.a) Write a short note on:
i) Boundary less organization
ii) Inverted pyramid structure.
b) State the merits and demerits of the following:
i) Committee organization
ii) Cellular Organization. [5+5]

6.a) Explain the process of new product design and development. Also highlight the various tools or recent methodologies employed in the process.

b) Distinguish between: i) Job, Batch and Mass productions ii) Product layout and process layout. [5+5]

OR

7.a) Discuss the objectives of value analysis. Also discuss its utility.

b) Identify an appropriate layout for each of the following situations. Justify your choice in a sentence or two:

i) A multi cuisine restaurant in a posh residential area in Hyderabad.

ii) The overhaul of helicopters.

iii) A fabricator of custom-made PCBs for a large number of electronic applications.

iv) An eye hospital.

v) A manufacturer of large turbines for power sector applications. [5+5]

8.a) Explain the steps in work sampling study. What are its merits and limitations? Describe the situations where such a study is useful.

b) In a time, study for a job done by a worker whose rating is 90, the data as follows: Observed time = 20 minutes, Personal needs allowance = 4% of basic time, Fatigue allowance = 2.5% of basic time, Contingency work allowance = 2% of basic time, Contingency delay allowance = 1% of basic time. Find: i) Basic time, ii) Work content and iii) Standard time. [5+5]

OR

9.a) What do you understand by SQC? Explain its need and utility in Industry with an example.

b) Construct X and R-charts from the following information and state whether the process is in control. For each of the following, X has been computed from a sample of 5 units drawn at an interval of 2 hours from an ongoing manufacturing process. Given A2 = 0.577 and D3 = 0 and D4 = 2.114. [5+5]

Sample	1	2	3	4	5	6	7	8	9	10
Mean X	23	37	34	13	29	26	39	45	34	20
Range R	10	30	11	21	17	20	5	14	38	34

10.a) Describe the objectives, procedure and methods used in job evaluation.

b) Write a brief note on point method and describe the various steps involved in it. [5+5]

OR

11.a) Bring out the difference between CPM and PERT and their suitability of use.

b) A project has the following time schedule.

Activity	1-2	1-3	1-4	2-5	3-6	3-7	4-6	5-8	6-9	7-8	8-9
Time in Weeks	2	2	1	4	8	5	3	1	5	4	3

Construct PERT network and compute i) Total float for each activity and ii) Critical path and its duration. [3+7]

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