

III B. Tech II Semester Regular/Supplementary Examinations April- 2018
MANAGEMENT SCIENCE

(Common to Electrical and Electronics Engineering and Chemical Engineering)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
 2. Answering the question in **Part-A** is compulsory
 3. Answer any **THREE** Questions from **Part-B**

PART -A

- | | | |
|---|---|------|
| 1 | a) What are the objectives of Planning? | [3M] |
| | b) Differentiate between Time study and motion study. | [4M] |
| | c) Explain Job Evaluation. | [4M] |
| | d) State the significance of PERT. | [4M] |
| | e) Explain Strategic Management. | [4M] |
| | f) What is Bench Marking? | [3M] |

PART -B

- | | | |
|---|---|------|
| 2 | a) Discuss the components of Theory of Scientific Management. | [8M] |
| | b) Explain the concept of organization as a process and as a structure. | [8M] |
| 3 | a) Define operations management. Explain the nature and scope of operations management. | [8M] |
| | b) What do you mean by ABC analysis? What are its advantages? | [8M] |
| 4 | a) The standard hours for job X is 100 hours. The job has been completed by A in 60 hours, B in 70 hours and C in 95 hours. The bonus system applicable to the job is as follows. | [8M] |

Percentage of Time Saved to time allowed	Bonus
Saving up to 10%	10% of time saved
From 11 to 20%	15% of time saved
From 21 to 40%	20% of time saved
From 41 to 100%	25% of time saved

The rate of pay is Rs.10 per hour. Calculate the total earnings of each worker and also the rate of earnings per hour.

- | | | |
|----|--|------|
| b) | Explain how market research can be carried out for formulating marketing strategy? | [8M] |
|----|--|------|



- 5 a) State the differences between PERT and CPM and list out advantages and disadvantages of both the techniques. [8M]

- b) The following table lists the jobs of a project with their time estimates. [8M]

Activity	Optimistic Time	Most likely time	Pessimistic Time
1-2	3	6	15
1-6	6	5	14
2-3	6	12	30
2-4	2	5	8
3-5	5	11	17
4-5	3	6	15
6-7	3	9	27
5-8	1	4	7
7-8	4	19	28

Draw the PERT network and determine the expected project completion time.

- 6 a) What do you mean by mission and vision of the organization? [8M]

- b) How do you carry out SWOT Analysis for a manufacturing unit? Explain. [8M]

- 7 a) What is MIS? State its applications. [8M]

- b) Explain various objectives of Supply Chain Management. [8M]



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PART -A

- 1 a) List the steps in decision making process. [4M]
 b) What is flow chart? [4M]
 c) What is Merit Rating? [3M]
 d) What are the steps involved in identifying critical path. [4M]
 e) Differentiate between objectives and policies. [4M]
 f) What is balanced Scorecard [3M]

PART -B

- 2 a) Briefly discuss the nature of management. [8M]
 b) Compare the assumptions of theory X and theory Y about the employees. [8M]
- 3 a) Give the basic procedure involved in work study. [8M]
 b) What is materials management? Explain its importance? [8M]
- 4 a) Calculate the earnings of a worker from the following details under [8M]
 a) Time rate system b) Piece rate system c) Halsey Plan d) Rowan Plan.
 Standard Time=60 hours;
 Time taken =40 hours
 Hourly rate of wage = Rs.2 per hour plan a dearness allowance of Rs.2 per hour.
- b) What do you mean by marketing? How it is differ from selling? [8M]
- 5 a) Write the detailed procedure involved in critical path method. [8M]
 b) The following table gives required information of a project. [8M]

Activity	Normal Cost		Crash Cost	
	Days	Cost (in Rs.)	Days	Cost (in Rs.)
1-2	3	500	2	1000
1-3	2	750	1	1500
1-4	6	1400	4	2600
2-4	5	1000	3	1800
2-5	7	1150	6	1450
3-4	2	800	2	800
4-5	4	1000	2	2400

The indirect cost is Rs.650 per day. Determine the optimum cost and time for the project.



- 6 a) Explain the elements of corporate planning process with suitable examples.. [8M]
b) What are the external factors to be considered while assessing opportunities and threats? [8M]
- 7 a) Write a note on Just-In-Time. [8M]
b) What is Material Requirement Planning? Explain. [8M]



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PART -A

- 1 a) What is MIS? [3M]
 b) Define work measurement. [4M]
 c) Name any two HR related controlling techniques. [4M]
 d) Write the advantages of scheduling in a construction project. [4M]
 e) Differentiate between Goals and objectives. [4M]
 f) Explain importance of management. [3M]

PART -B

- 2 a) What are the challenges you have to face as a manager? Discuss. [8M]
 b) Explain merits and demerits of virtual organization. [8M]
- 3 a) What is method study? List out various charts associated with it and briefly explain any one type. [8M]
 b) Discuss about various types of control charts. [8M]
- 4 a) During the first week of January 2018 the workman Mr. Arvind manufactured 300 articles. He receives wage for a guaranteed 48 hours a week at the rate of Rs.4 per hour. The estimated time to produce one article is 10 minutes and under the incentive scheme the time allowed is increased by 20%. Calculate his wages according to a) Piece rate system b) Halsey Premium bonus plan c) Rowan's plan. [8M]
 b) Explain the marketing strategies based on product life cycle. [8M]
- 5 a) What do you mean by crashing a network? State step by step procedure of crashing. [8M]
 b) A project has nine activities, the expected time of each activity is as follows: [8M]

Activity	1-2	1-3	2-4	3-4	4-6	5-6	3-5	5-7	6-7
Expected Time	6	8	7	12	3	5	7	11	10

- (a) Draw the project network
 (b) Identify the critical path
 (c) Find project duration
- 6 a) "Proper scanning of environment is essential for effective execution of strategy" Justify the statement citing the elements and merits of environmental scanning. [8M]
 b) Explain the importance of Vision and Mission statements. [8M]
- 7 a) What is Balanced Score Card Approach? [8M]
 b) Explain Capability Maturity Model. [8M]

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PART -A

- 1 a) What is nature of Management? [3M]
- b) Need for Inventory control. [4M]
- c) Bring out Characteristic features of sales promotion. [4M]
- d) What is scheduling in project? [3M]
- e) Differentiate between policies and programmes. [4M]
- f) Explain the concept of TQM [4M]

PART -B

- 2 a) Name and describe the various levels of management with their functions. [8M]
- b) What is matrix organization structure and what is uniqueness? [8M]
- 3 a) Define Statistical Quality Control? Explain the significance and advantages of Statistical Quality Control? [8M]
- b) What do you understand by Economic Order Quantity? [8M]
- 4 a) Explain the functions of Marketing. [8M]
- b) Define channels of distribution. State its functions. [8M]
- 5 a) Explain how you determine the probability of meeting the scheduled date of completion of project. [8M]
- b) The following table indicates the list of activities with corresponding duration and cost. The indirect cost is Rs.25 per day. Determine the optimum cost and duration of the project. [8M]

Activity	Normal Cost		Crash Cost	
	Time (Days)	Cost (in Rs.)	Days	Cost (in Rs.)
1-2	3	180	1	220
2-3	4	120	2	160
2-4	7	50	3	70
3-4	5	40	2	70

- 6 a) Explain the generic strategy alternatives with examples. [8M]
- b) "Vision, mission, goals & strategies are interdependent" Justify the statement with explanations and their contribution to organization success. [8M]
- 7 a) Define Enterprise Resource Planning? State the advantages and disadvantages of Enterprise Resource Planning? [8M]
- b) Write a note on Six Sigma. [8M]

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