

**III B.Tech. II Semester Regular Examinations, April/May -2005**  
**MANAGEMENT SCIENCE**  
 ( Common to Mechanical Engineering, Computer Science & Engineering,  
 Chemical Engineering, Information Technology, Metallurgy & Material  
 Technology, Electronics & Computer Engineering and Production  
 Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions  
 All Questions carry equal marks

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1. Explain the nature and features of management?
2. Discuss the features of Line and Staff organization with a chart.
3. Check whether the number of observations is adequate for an accuracy of  $\pm 5\%$  and confidence level of 95% limit if the number of observation of the workers working is 2500 and the number of observation of workers idle is 500.
4. Evaluate different methods of purchasing?
5. What is Human Resource Management? What are its elements? What is its importance to organizations? Illustrate.
6. Explain and evaluate various methods of merit rating?
7. Identify the factors that are to be diagnosed in external and internal environment of a business organization.
8. 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.

Activity	Normal		crash	
	cost (Rs.)	time (days)	cost (Rs.)	days
1-2	180	3	220	1
2-3	120	4	160	2
2-4	50	7	70	3
3-4	40	5	70	2

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1. What are the managerial functions? Discuss.
2. Define departmentation. Explain any two methods of departmentation.
3. What is acceptance sampling? Illustrate the concepts of single and double sampling.
4. Explain the functions of materials manager?
5. What is personnel management? what are its features and functions?
6. What is recruitment? Evaluate different the sources of recruitment.
7. How do you translate corporate vision into action? Explain with an example?
8. For the particulars of project shown in the table below draw a PERT network, determine the critical path and the probability of completion of the project within 72 days.

Activity	Time (days)		
	Optimistic time( $t_o$ )	Most likely time( $t_m$ )	Pessimistic time( $t_p$ )
10-20	6	10	14
10-30	2	4	6
20-50	12	16	24
30-40	16	24	34
40-50	0	0	0
50-80	10	14	18
40-60	12	18	24
40-70	6	12	16
60-90	2	4	6
80-90	6	12	16
70-100	16	30	50
90-100	4	8	12

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1. Explain the nature and features of management?
2. What do you understand by decentralization? How do you determine the need for decentralization? Explain.
3. What is a fixed position layout and under what conditions you adopt it? Explain.
4. The various functions of marketing? Explain.
5. How is Human Resource Manager different from other functional managers? Explain.
6. Explain and evaluate various methods of merit rating?
7. What is strategic business unit and what is its role and relevance in corporate planning? Illustrate.
8. Draw the network for the following project; it is further given that project completion time is 42 days. Find the project duration. Also identify the critical path.

Activity	Description	Duration-days
1-2	Idea generation	7
1-3	Market survey	10
2-4	Prototype making	7
3-5	Advertisement campaign	9
4-5	Distribute samples	5
4-6	Commencement of production	5
5-7	Fixing up sales outlet	7
6-7	Manufacture	14

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1. Explain the Theory of Hierarchy of Human Needs.
2. Why does 'organizing' assumes increasing importance in the modern times?
3. Compare and contrast product and process layout.
4. What are the costs associated with the inventory control system? How would you balance them?
5. What are the requirements for a successful Human Resource manager? Explain.
6. What is recruitment? Evaluate different the sources of recruitment.
7. How will you conduct SWOT analysis? Illustrate with an example.
8. A manufacturing company is planning to introduce a new product commercially. The list of activities to be carried out with the corresponding duration of time in weeks is listed below.

Activity	description	duration	immediate predecessor
A	initial discussions	3	-
B	product design	11	A
C	market survey	9	A
D	market evaluation	2	C
E	product costing	5	B
F	Sales plan	6	C
G	Product pricing	2	D,E
H	Prototype construction	11	F,G
I	Market information preparation	8	B
J	Prototype testing	9	H,I

Draw the network to represent various activities of the project, determine the minimum duration of the project.

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