

Code No: 58007

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, May - 2017

MANAGEMENT SCIENCE  
(Common to CE, CSE, IT, CEE)

Time: 3 Hours

Max. Marks: 75

Answer any Five Questions  
All Questions Carry Equal Marks

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1. Outline in detail the 14 principles of management postulated by Henry Fayol. [15]
- 2.a) What is authority? What is responsibility? How are they inter related?  
b) Explain the nature and characteristics of cellular organization. [7+8]
3. The operator engaged in an assembly operation performed the following work elements. Given below are the individual elemental times and the average rating.

element	cycle					rating
	1	2	3	4	5	
A	0.22	0.24	0.28	0.26	0.25	80
B	0.14	0.18	0.15	0.13	0.15	100
C	0.37	0.35	0.37	0.33	0.33	120
D	0.10	0.09	0.12	0.10	0.09	90
E	0.12	0.13	0.11	0.11	0.13	100

- a) Calculate the normal time of the job.
- b) Calculate the standard time of the job assuming allowances at 15% of normal time. [15]
- 4.a) What are the principles of effective stores location?  
b) What are the elements of marketing? Elaborate. [7+8]
- 5.a) What are the objectives of Job evaluation and what are the steps involved for conducting in job evaluation?  
b) What is grievance in the context of industrial relations? What is the established mechanism for handling grievances? [8+7]
6. The following data pertains to a project network.

Activity	Normal duration (weeks)	Normal cost Rs.	Crash Duration weeks	Crash cost Rs.
1-2	4	8000	3	16,000
1-3	8	5000	5	10,500
2-3	6	7000	4	10,000
2-4	9	9000	7	17,000
3-4	5	6000	3	13,000

The indirect cost of the project is Rs. 3500 per week. Determine the optimum cost and optimum duration of the project. Also draw the least cost network. [15]

- 7.a) What are the internal factors that need to be taken into account to assess the strengths and weaknesses of an organization?
- b) Which are the three generic strategy alternatives? [9+6]
- 8.a) What is JIT concept? What are the prerequisites to make JIT successful?
- b) Explain the concept of PDCA cycle. [9+6]

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