Code: ME6T5

III B.Tech - II Semester – Regular Examinations – May 2015

INDUSTRIAL ENGINEERING & MANAGEMENT
(MECHANICAL ENGINEERING)

Duration: 3 hours   Marks: 5x14=70

Answer any FIVE questions.   All questions carry equal marks

Tables/Codes: Normal distribution tables should be supplied.

1. a) Compare the assumptions of theory 'X' and theory 'Y' about the employees.   7 M

   b) Briefly explain Maslow's need hierarchy theory.   7 M

2. a) What are the advantages and draw backs of line organization? State its applicability.   7 M

   b) Briefly explain the purpose of departmentation & decentralization   7 M

3.   What is leadership? Briefly explain different leadership styles by stating their advantages & disadvantages.   14 M

4. a) Mention and explain various factors you consider in selecting a location for starting a new industry.   7 M

   b) What is meant by Plant Layout? What are the objectives of good plant layout?   7 M

5. a) What is method study? List out various charts associated with it and briefly explain any one type.   6 M

   b) What are therbligs? When are they used? What are the advantages of micro-motion study?   8 M

6. a) Explain various steps involved in time study.   6 M

   b) Briefly explain various performance ratings   8 M

7.   The activity details along with time estimates and precedence relationships are given below.   14 M

Activity	A	B	C	D	E	F	G	H	I
Optimistic time	2	2	4	2	2	3	2	5	3
Most likely time	2	5	4	2	5	6	5	8	6
Pessimistic time	8	8	10	2	14	15	8	11	15

Activities A, B and C can start simultaneously. Activity D follows activity A while E follows B. Activity D and E are followed by activity G while F is dependent on C, H depends on D and E, while I depends on F and G.

i) Construct the network

ii) Find the expected duration and variance of each activity

iii) Calculate the slack for each event

iv) What is the critical path and expected project duration?

v) If the project due date is 28days, what is the probability of not meeting the due date?

vi) What should be the project duration for the probability of completion of 95%?

8. a) With the aid of a neat line diagram explain the OC curve.

7 M

b) Briefly explain how the TQM model benefits the organization.

7 M