

Code: ME6T5

III B.Tech - II Semester – Regular Examinations – May 2017

**INDUSTRIAL ENGINEERING & MANAGEMENT
(MECHANICAL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1.

- a) Distinguish Mc Gregor's Theory X and Theory Y.
- b) According to Maslow what is the hierarchy of human needs?
- c) How travel chart is helpful in reducing movements between facilities of material/human?
- d) Enumerate the types of leadership based on authority.
- e) Give two examples for assignable causes with respect to quality control.
- f) Write a note on quality circles.
- g) List the allowances considered while calculating standard time.
- h) What are the objectives of conducting method study?
- i) What are the general guidelines need to follow while drawing project network diagrams?
- j) Define: i) critical path ii) dummy activity.
- k) Which location would you prefer to start a steel company? Urban or rural? Why?

PART – B

Answer any *THREE* questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain role of Industrial Engineer in improving productivity in manufacturing plants. 8 M
- b) Discuss the principles and limitations of scientific management. 8 M
3. a) What are the advantages and disadvantages of decentralization? 6 M
- b) What is the difference between plant location and plant layout? Give an example. 5 M
- c) Write a note on traits approach to leadership. 5 M
4. Write a note on:
- i) OC curve. 4 M
- ii) Control charts for attributes. 8 M
- iii) ISO 9000. 4 M
5. a) A time study was made of an existing job to develop new time standards. The worker was observed for 30 minutes during which he made 20 units. He was rated at 90% by the analyst. The firm's allowance for rest and personal time is 12%.

(i) What is the normal time for the task?

(ii) What is standard time for the task?

8 M

b) What is method study? Explain the different steps involved in method study.

8 M

6. a) Using the following information plot a project network.

Determine the critical path for the network.

12 M

Activity	Activity duration (in weeks)
0-1	5
0-2	10
1-2	4
1-3	8
1-4	3
2-3	6
2-5	8
3-5	7
3-6	11
4-6	8
4-7	9
5-7	9
5-6	4
6-7	1

b) What is crashing of a project?

4 M