Code No: ME1513   **GEC-R14**

II B. Tech II Semester Supplementary Examinations, January 2017
INDUSTRIAL ENGINEERING AND MANAGEMENT
(Mechanical Engineering)

Time: 3 Hours   **Max. Marks: 60**

Note: All Questions from **PART-A** are to be answered at one place.

Answer any **FOUR** questions from **PART-B**. All Questions carry equal Marks.

PART-A
6 × 2 = 12M

1. Define organization.
2. What are the types of production?
3. What are the objectives of method study?
4. List out the types of sampling inspection plans.
5. What is the importance of HRM?
6. What is the significance of float?

PART-B
4 × 12 = 48M

1. a) What are the factors affecting motivation? Describe motivational techniques. (6M)

   b) What are the roles and functions of an industrial engineer? (6M)

2. What are various types of layouts? Explain their relative advantages. (12M)

3. a) Describe stop watch procedure for collecting time study data. (6M)

   b) Describe S.I.M.O. chart. (6M)

4. a) Ten castings were inspected in order to locate defects in them. Every casting was found to contain certain number of defects as given below. It is required to plot a C-chart and draw the conclusions. (9M)

Castings	No. of defects found on inspection(c)
1	2
2	4
3	1
4	5
5	5
6	6
7	3
8	4
9	0
10	7

   b) What is quality circle? What are the objectives of quality circle? (3M)

5. a) What are the objectives and needs of Training? (6M)

   b) Describe various methods of Merit Rating. (6M)

6. The following information is given in the CPM network. (12M)

Successor Event-j	Predecessor Event-i	Duration t_{ij}
9	8	6
8	7	11
8	6	6
7	6	0
7	5	9
6	4	9
6	3	8
5	2	6
4	2	7
4	1	11
3	1	12
2	1	5

   i) Sketch the network;

   ii) Calculate the total float, free float and independent float for each activitiy;

   iii) Identify the critical path for network

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