H.T.No. | | | | | | | | | | |

Code No: ME1513 **GEC-R14**

II B. Tech II Semester Regular Examinations, May 2016

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. What is Organization Structure?
2. List out various Flow Patterns used for material movement in plant.
3. What do you mean by Micro Motion Study?
4. Write short notes on Kaizen.
5. What is the difference between HRM and HRD?
6. What are the applications of PERT and CPM?

PART B

4 × 12 = 48 M

1. a) Explain F.W Taylor's Scientific Management Theory. (6M)
   b) Explain the Functions of Management? (6M)
2. a) Explain different types of Plant Maintenance. (6M)
   b) Discuss various types of Production Systems with suitable examples. (6M)
3. a) Describe the techniques of Work Measurement in detail? (8M)
   b) State the procedural steps used in performing Method Study? (4M)
4. Construct '$\overline{X}$' and 'R'Charts from the following information and state whether the process is in control or not. For each of the following $\overline{X}$ has been computed from a sample of 5 units drawn at an interval of half an hour from an ongoing manufacturing process. (12M)

Sample	1	2	3	4	5	6	7	8	9	10
$\overline{X}$	20	34	45	39	26	29	13	34	27	23
R	23	39	14	5	20	17	21	11	40	10

(Where, A_2=0.58, D_3=0 and D_4=2.11 at a given sample size of n=5)

5. a) What is the purpose of Training? Explain different Training Methods. (6M)

   b) What is Recruitment? Evaluate different Sources of Recruitment? (6M)

6. A small maintenance project consists of the following jobs whose precedence relationship is given below. (12M)

S.No	Job	Duration in Days
1	1-2	15
2	1-3	15
3	2-3	3
4	2-5	5
5	3-4	8
6	3-6	12
7	4-5	1
8	4-6	14
9	5-6	3
10	6-7	14

   a) Draw an arrow diagram representing the project.

   b) Find the Total Duration of the Project.

   c) Identify the Critical Path.

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