Code No: **R41216**   **R10**   Set No. 1

IV B.Tech I Semester Supplementary Examinations, February/March - 2018
INDUSTRIAL ENGINEERING AND MANAGEMENT
(Open Elective)

Time: 3 hours   Max. Marks: 75

Answer any FIVE Questions
All Questions carry equal marks
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1 a) Give the essence of Industrial Engineering and explain its role in identifying and solving different types of problems faced by industries. [8]
   b) What are the differences between production management and industrial engineering? [7]

2 a) List out and explain various types of layouts along with applications. [8]
   b) Explain various quantitative techniques used in optimal design of plant layouts. [7]

3 a) Discuss briefly the procedure adopted for work study? [8]
   b)   i). Write the objectives of work study.
        ii). What do you understand by PMTS.?
        iii). Define Ergonomics. [7]

4 a) Construct X and R charts from the following information and state whether the process is in control. For each of the following X has been computed from a sample of 5 units drawn at an interval of half an hour from an ongoing manufacturing process.

Sample	1	2	3	4	5	6	7	8	9	10
X	20	34	45	39	26	29	13	34	37	23
R	23	39	14	5	20	17	21	11	40	10

[8]

   b) Write a short notes on the following
       i). Sampling risks
       ii). Process Control
       iii). Confidence limits [7]

5 a) Differentiate personnel and industrial relations from HRM. [8]
   b) i)   How does job rotation promote employee motivation and satisfaction?
       ii) Define HRD. Why is it necessary? [7]

6 a) What do you mean by zero defect concept? And how it is achieved? [8]
   b) Explain in detail about ISO quality system. [7]

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7 a) Define valve engineering and give its procedure.   [8]

   b) Explain in detail about the concept and significant aspects of supply chain   [7]
       management.

8 a) What are the differences between PERT and CPM?   [8]

   b) Write a short notes on the following
       i).   Time estimate in PERT
       ii). Optimistic time estimate
       iii). Average time estimate   [7]

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