Roll No .....

AU/IP/IEM/ME/TX/PR-601

B.E. VI Semester

Examination, June 2015

Operation Management

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each questions are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What is Operations Management? How it is different from Industrial Management?
   b) What is Little's Law.
   c) What is MTO and MTS of production strategy.
   d) Explain the Porter's five forces for developing business strategy?

   OR

   What is productivity. How its helps to enhance standard of living?

2. a) What is product life cycle to launch a new product.
   b) What is difference between simplification and standardisation?
   c) What is modular design? Write down its advantages?

d) Discuss Valerie's service quality model.

OR

Discuss the service triangle of customer, provider and system in product life cycle management.

3. a) What is quality of design?

b) What is meaning of terms availability & maintainability.

c) What is reliability? Draw a labelled diagram of bathtub curve.

d) Explain the significance of taguchi loss function in quality management.

OR

What do you mean by process capability. If a process have mean $\mu = 41.5$, standard deviation $\sigma = 0.92$, USL and LSL are 47 and 39 respectively. Calculate process capability and process capability indices for the process.

4. a) What are objectives of good plant layout.

b) Write down various factors which affects the location of a plant.

c) Discuss the problem of inventory flow in process layout.

d) What are the merits and limitations of CRAFT? What modification do you suggest?

OR

What are the advantages of a line layout that one should avoid in cellular manufacturing? How would one do that? Explain.

5. a) Distinguish between aggregate planning and master scheduling?

b) Why forecasting is required? List down the method used in forecasting?

c) What is the need of assembly line balancing?

d) Write down short notes on

i) TOC and

ii) JIT

OR

A machine operator has to perform two operations turning and threading, on a number of different jobs. The time required to perform these operations (in minutes) for each job is known. Determine the order in which the jobs should be processed in order to minimize the total time required to turn out all the jobs.

Job	Time for Turning (minutes)	Time for threading (minutes)
1	3	8
2	12	10
3	5	9
4	2	6
5	9	3
6	11	1

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