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Roll No .....

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

B.E. VI Semester

Examination, June 2016

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 question 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) State Little's Law. State its applications.
   b) What do you mean by the term "order qualifiers" and "order winners". Explain?
   c) Explain Porter's five forces model.
   d) Explain the term Productivity. State its types. Discuss factors affecting it.

   OR

   Define ERP, WIP. Discuss in detail the procedure of doing SWOT analysis.

2. a) State Valerie's service quality model.
   b) Compare traditional vs concurrent design.
   c) What is meant by standardization? How it is advantageous in designing? State its limitations.
   d) Draw PLC (Product Life Cycle) with its all phases. Discuss characteristics of all the phases with suitable examples.

   OR

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Explain the terms Design of Manufacturing (DFM) and Design for Environment (DFE). Discuss why it is important?

3. a) Explain the funnel - marble experiment.
   b) Explain Taguchi loss function. Discuss "cost of quality".
   c) Discuss chain action of improving quality to productivity to motivation and low cost.
   d) Define and explain the terms "six sigma" and "TQM".

   OR

   Write short note on following:
   i) ISO-9000 ii) Bath-tub curve.

4. a) Differentiate between process layout and product layout.
   b) State and draw basic plant layouts.
   c) Explain Brown-Gibson Model.
   d) What do you mean by Group Technology? Discuss in detail. State its advantages and limitations.

   OR

   Explain dimensional and factor analysis methods.

5. a) Define the terms : JIT, Kaizen and Sequencing.
   b) Briefly describe the Delphi Technique.
   c) Write short note on "Lean Manufacturing".
   d) Explain the following terms:
      i) Aggregate planning
      ii) Matching supply to demand fluctuations over time horizon.
      iii) Computer program CRAFT.

   OR

   Explain the following terms:
   i) Forecasting tool
   ii) Assembly line balancing
   iii) Master production schedule and material planning.

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