

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: BTECH
BRANCH: P & IE**

**SEMESTER : V
SESSION : MO/2022**

SUBJECT: PE307 COMPETITIVE MANUFACTURING STRATEGIES

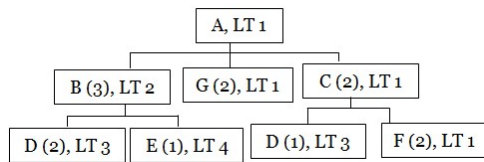
TIME: 3:00 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Describe competitive advantages of local firms and MNCs [5]
Q.1(b) What are various manufacturing objectives? Discuss scopes of those objectives [5]
- Q.2(a) Describe in brief about five important guidelines of “Design for manufacturability”. [5]
Q.2(b) What is vendor rating? Discuss various criteria for vendor rating. [5]
- Q.3(a) What are various types of waste in Lean manufacturing? [2]
Q.3(b) What are barriers and benefits of Lean manufacturing? [3]
Q.3(c) What do you mean by a Kanban system? Describe various type of Kanbans used in Lean manufacturing. [5]
- Q.4(a) How simulation is a competitive tool in manufacturing environment? [2]
Q.4(b) Briefly discuss the role of CIM in the technological advancement of manufacturing industries? [3]
Q.4(c) Based on given product structure tree and lead times; [5]



Prepare BOM and materials requirements plan, if 50 units of A is required in week 10, 20 and 15 units of B and C are needed as spares in week 8 and 6 respectively?

- Q.5(a) Compare the system features of Dedicated manufacturing, RMS, and FMS? [2]
Q.5(b) Define FMS? How FMS can be classified? [3]
Q.5(c) Elaborate the cellular manufacturing system along with its advantages over other manufacturing strategies? [5]

:::28/11/2022:::M