

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

**CLASS: BTECH
BRANCH: PIE**

**SEMESTER : V
SESSION : MO/2024**

SUBJECT: PE307 COMPETITIVE MANUFACTURING STRATEGIES

TIME: 3 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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		CO	BL
Q.1(a)	Explain the Competitive model proposed by Michael Porter.	[5] 1	1
Q.1(b)	Define Manufacturing Strategy? Discuss the strategic decision areas for manufacturing strategy.	[5] 1	2
Q.2(a)	What do you understand by product modularity and how modularity is attained? How can a firm attain competitive advantages over its competitors?	[5] 2	2
Q.2(b)	What does the term 'design for manufacturability' mean? What are the guidelines for "design for manufacturability"?	[5] 2	2
Q.3(a)	Define the JIT system and explain the basic concept of JIT manufacturing. What are the key pillars of JIT?	[5] 3	2
Q.3(b)	Write short notes on the following: i) Kanban ii) Agile Manufacturing	[5] 3	1
Q.4(a)	What is the role of Simulation as a tool for competitive advantage?	[5] 4	3
Q.4(b)	Explain the concept of Industry 4.0. What are the different areas of manufacturing where intelligent systems can be applied?	[5] 4	2
Q.5(a)	What is the difference between Dedicated manufacturing system (DMS) and Flexible manufacturing system (FMS)?	[5] 5	2
Q.5(b)	Explain Re-configurable manufacturing system (RMS).	[5] 5	2

:::22/11/2024:::M