

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

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

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

SUBJECT: PE307 COMPETITIVE MANUFACTURING STRATEGIES

TIME: 2 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 25.
 2. Candidates attempt for all 25 marks.
 3. Before attempting the question paper, be sure that you have got the correct question paper.
 4. The missing data, if any, may be assumed suitably.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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Q1	(a) Describe the effects of World Trade Organization in Indian Market.	[3]	1	Understanding
Q1	(b) Explain various types of competitive advantages	[2]	1	Analysing
Q2	(a) What is a Modular design? Explain how modular design can be used for creating product variety.	[3]	2	Remembering, Analysing
Q2	(b) Categorize various interactions in Design Structure Matrix	[2]	2	Analysing
Q3	(a) What are 7 C's in supplier evaluation?	[2.5]	2	Remembering
Q3	(b) Describe benefits of vendor rating.	[2.5]	2	Understanding
Q4	(a) Compare between an MRP system and a JIT system.	[2]	3	Evaluating
Q4	(b) Bevel gear manufacturing company Ranchi Gears uses a Kanban system in their plant. The yearly demand is around 10000. Each container has a combined waiting and processing time of 0.4 days. The container size is 70 gears and safety factor (α) is 5 percent. i) How many Kanban card sets should be authorized? ii) What is the maximum work in process inventory of gears in the system?	[3]	3	Creating
Q5	(a) Write short notes on any TWO of the following topics i) 5'S, ii) Value Stream Mapping, iii) Single Minute Exchange of Die	[2.5x2]	3	Creating

:::::: 01/10/2022 :::::M