

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

CLASS: B.Tech.
BRANCH: PIE

SEMESTER : 7
SESSION : MO/2025

SUBJECT: PE407 ADVANCED MANUFACTURING PROCESSES

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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		CO	BL
Q.1(a)	What are the economic and production Factors associated with conventional casting processes.	[2] 1	3
Q.1(b)	Briefly mention the process sequences followed in expanded polystyrene process.	[3] 1	2
Q.2(a)	Mention two products made from shell molding.	[2] 1	1
Q.2(b)	Discuss the pros and cons of squeeze casting.	[3] 1	2
Q.3(a)	Why do we require advanced welding processes, although there are numbers of welding techniques available?	[2] 2	3
Q.3(b)	Classify diffusion welding methods.	[3] 2	2
Q.4(a)	What are the problems faced in underwater welding?	[2] 2	2
Q.4(b)	Discuss various ways to perform underwater welding operation.	[3] 2	3
Q.5(a)	What do you mean by super-plasticity?	[2] 3	1
Q.5(b)	How thixoforming differs from thixocasting?	[3] 3	2

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