

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION MO/2024)

CLASS: BTECH
BRANCH: PIE

SEMESTER : VII
SESSION : MO/2024

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

		CO	BL
Q.1(a)	Briefly describe the Industrial process of Plaster mold casting.	[2]	1 2
Q.1(b)	Explain the vacuum mold casting process with suitable industrial applications.	[3]	1 3
Q.2(a)	Summarize the Industrial application of Squeeze casting process.	[2]	1 2
Q.2(b)	Explain the ceramic shell investment casting processes. What are the advantages over Plaster mold casing processes?	[3]	1 3
Q.3(a)	Summarize the characteristics of a good Underwater Welding processes.	[2]	2 2
Q.3(b)	Explain the Friction stir-welding processes with suitable applications.	[3]	2 2
Q.4(a)	Summarize the advantages and limitations of Solid-State Welding process.	[2]	2 2
Q.4(b)	Explain the Explosive-welding processes with suitable applications.	[3]	2 2
Q.5(a)	Illustrate the application of Super plastic forming processes.	[2]	3 2
Q.5(b)	Briefly describe the High Energy Rate Forming (HERF) techniques.	[3]	3 3

:25/09/2024:M