

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP/2025)**

**CLASS: B.TECH.
BRANCH: MECHANICAL ENGG.**

**SEMESTER : VI
SESSION : SP/2025**

SUBJECT:ME359 POWER PLANT ENGINEERING

TIME: 2 Hours

FULL MARKS: 25

INSTRUCTION:

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) Define modern power plant. How are power plant classified?	[2]	1	L-1 L-2
Q.1(b) Explain the terms: (i) Central station (ii) Industrial power station.	[3]	1	L-2
Q.2(a) Discuss the Indian energy scenario.	[2]	1	L-2
Q.2(b) State the advantages and disadvantages of hydro-electric power plant	[3]	1	L-1
Q.3(a) List the elements of modern power plant.	[2]	2	L-1
Q.3(b) Distinguish between fire tube and water tube boiler.	[3]	2	L-2
Q.4(a) Define ash handling.	[2]	2	L-1
Q.4(b) State the advantages and disadvantages of coal handling system.	[3]	2	L-1
Q.5(a) Describe the sedimentation method of feed water treatment.	[2]	2	L-2
Q.5(b) Explain with neat sketch working of a spreader stoker.	[3]	2	L-2

:28/02/2025:E