

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP2025)**

**CLASS: BTECH
BRANCH: MECHANICAL**

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

SUBJECT: ME305 AUTOMOBILE ENGINEERING

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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		Marks	CO	BL
Q.1(a)	List the different types of temperature sensors and discuss its utility in automotive system	[2]	1	2
Q.1(b)	With neat sketch explain the construction and working of LVDT.	[3]	1	3
Q.2	Explain the working of starting system of petrol engine with neat sktech.	[5]	1	3
Q.3	Sketch the construction of Electronic ignition system and explain its working.	[5]	1	3
Q.4	Explain road performance curve. How it is useful in determining the availability of surplus tractive effort.	[5]	2	2
Q.5	Derive an expression for maximum acceleration and reaction forces for front wheel driven vehicle.	[5]	2	4

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