## Sixth Semester B.E./B.Tech. Degree Examination, June/July 2025 Modern Mobility

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M: Marks, L: Bloom's level, C: Course outcomes.

Modula. List the main components of Internal their function.  D. Why cooling is necessary for I.C. Eng system with neat sketch.  OR  D. With neat sketch, explain the working  D. Explain Splash lubrication system with the system with neat sketch for dry  Modula. Explain multi-plate clutch with neat displayed.  With neat sketch, explain the working	Combustion Engine. Briefly explain ine? Explain thermo-Syphon cooling of battery ignition system.  I neat sketch.  I and wet liners.  I and wet liners.	M 10 10 8 6	L L2 L2 L2 L2	CO2
system with neat sketch.  OR  With neat sketch, explain the working  Explain Splash lubrication system with  Briefly explain with neat sketch for dry  Modu  Explain multi-plate clutch with neat dis	of battery ignition system.  neat sketch.  and wet liners.  le – 2  agram.	8 6	L2 L2 L2	CO2
<ul> <li>With neat sketch, explain the working</li> <li>Explain Splash lubrication system with</li> <li>Briefly explain with neat sketch for dry</li> <li>Modu</li> <li>Explain multi-plate clutch with neat dis</li> </ul>	neat sketch.  and wet liners.  le - 2  agram.	6	L2	CO2
Explain Splash lubrication system with Briefly explain with neat sketch for dry Modu  Explain multi-plate clutch with neat did	neat sketch.  / and wet liners.  le – 2 agram.	6	L2	CO2
Briefly explain with neat sketch for dry  Modu  Explain multi-plate clutch with neat div	and wet liners.  le - 2 agram.	6	L2	
Modu  Explain multi-plate clutch with neat die	le – 2 agram.			CO2
Explain multi-plate clutch with neat di	agram.	10	L2	000
		10	L2	000
With neat sketch, explain the working	of four speed symphromach goor hav			CO2
, this near sheren, explain the working	of four speed synchroniesh gear box.	10	L2	CO2
OR				
Explain the working of Differential wi	h neat sketch.	10	L2	CO2
	-	10	L2	CO2
Modu	le-3	l	l	
		10	L2	CO2
Sketch and explain hydraulic braking s	ystem.	10	L2	CO2
OR	*	1		
With a neat sketch, explain Air Susper and disadvantages.	sion System. Mention its advantages	10	L2	CO2
Explain with neat sketch Antilock Bral	ring System (ABS).	6	L2	CO2
. Differentiate between disc brake and d	rum brake.	4	L2	CO2
	Explain the working of Differential with the Explain Radial and conventional tyradvantages and disadvantages of Tubel  Modula. Explain with neat diagram working advantages of power steering.  Sketch and explain hydraulic braking some of the Explain Air Suspensand disadvantages.  Explain with neat sketch Antilock Brakes.	Explain Radial and conventional tyres used in Automobiles. What are advantages and disadvantages of Tubeless tyres?  Module – 3  Explain with neat diagram working of power steering and mention the advantages of power steering.  Sketch and explain hydraulic braking system.  OR  With a neat sketch, explain Air Suspension System. Mention its advantages and disadvantages.  Explain with neat sketch Antilock Braking System (ABS).	Explain the working of Differential with neat sketch.  D. Explain Radial and conventional tyres used in Automobiles. What are advantages and disadvantages of Tubeless tyres?  Module – 3  Explain with neat diagram working of power steering and mention the advantages of power steering.  D. Sketch and explain hydraulic braking system.  OR  With a neat sketch, explain Air Suspension System. Mention its advantages and disadvantages.  D. Explain with neat sketch Antilock Braking System (ABS).  6	Explain the working of Differential with neat sketch.  D. Explain Radial and conventional tyres used in Automobiles. What are advantages and disadvantages of Tubeless tyres?  Module – 3  Explain with neat diagram working of power steering and mention the advantages of power steering.  D. Sketch and explain hydraulic braking system.  OR  Sketch and explain hydraulic braking system.  OR  Explain with neat sketch, explain Air Suspension System. Mention its advantages and disadvantages.  D. Explain with neat sketch Antilock Braking System (ABS).  6 L2

		Module – 4			
Q.7	a.	Explain gas pollutants of Automobile and their effects on environment.	10	L2	CO3
	b.	Write a short note on Emission Standards.	5	L2	CO3
	c.	Explain in brief about CNG vehicles and its advantages and disadvantages.	5	L2	CO3
		OR		I.	
Q.8	a.	Explain with layout of electric hybrid vehicles, its operation and function of transmission and control system.	10	L2	CO3
	b.	Explain about I.C. Engine fuels and its advantages and disadvantages.	10	L2	CO3
		Module – 5			
Q.9	a.	What is the working principle of electric vehicles and explain the components of 4 wheeler vehicles with layout.	10	L2	CO4
	b.	What are the different types of motor used in electric vehicles? Explain the construction and working of any one.	10	L2	CO4
		OR	-	1	
Q.10	а.	What are types of batteries used in electric vehicles? Explain the construction and working of any two.	10	L2	CO4
	b.	What are requirements of battery charging of electric vehicles? How fire safety measures taken in Electric Vehicles.	10	L2	CO4
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