CBCS SCHEME

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BAU301

Third Semester B.E./B.Tech. Degree Examination, June/July 2025
Automotive Engines

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.

		Module – 1	M	L	C
Q.1	a.	Demonstrate construction and working of CI engine (4 stroke)	10	L3	CO1
	b.	Describe the Actual valve timing diagram of 4 stroke petrol engine.	10	L1	CO1
		OR			
Q.2	a.	Compare 2 stroke engines with 4 stroke engine.	10	L4	CO1
	b.	Show the working of Otto cycle with suitable diagram and equations.	10	L3	CO1
		Module – 2			
Q.3	a.	Illustrate the working of simple fixed venturi carburetor.	10	L4	CO2
	b.	Demonstrate the electronic petrol injection system.	10	L3	CO2
		OR			
Q.4	a.	Demonstrate the working of common rail diesel injection system.	10	L3	CO2
	b.	Explain the Pneumatic Governor with a neat sketch.	10	L2	CO2
		Module – 3			
Q.5	a.	Write the summary of stages of combustion in SI engine.	10	L2	CO3
	b.	Explain the effects of engine variables on knock or detonation in SI engine.	10	L2	CO3
		OR			
Q.6	a.	Describe the stages of combustion in CI engine.	10	L1	CO3
	b.	Discuss the induction swirl with advantages and disadvantages.	10	L2	CO3
		Module – 4			
Q.7	a.	Discuss the effects of supercharger. Also discuss about vane types of supercharger.	10	L2	CO3
	b.	Demonstrate the turbocharger control with variable guide vanes.	10	L3	CO3
		OR			
Q.8	a.	Demonstrate the construction and working of forced circulation type cooling system.	10	L3	CO3
	b.	Compare Liquid and Air cooling system.	10	L4	CO3

		Module – 5			
Q.9	a.	Describe the structure of petroleum.	10	L1	CO4
	b.	Conclude the working of pressure feed lubrication system.	10	L4	CO4
		OR			
Q.10	a.	Explain the Octane and Cetane number of fuels.	10	L2	CO4
	b.	Describe the BIS standards for fuels and lubricants.	10	L1	CO4

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