

ANURAG Engineering College
(An Autonomous Institution)

III B.Tech I Semester Regular/Supplementary Examinations, Dec-2023/Jan-2024

AUTOMOBILE ENGINEERING
(MECHANICAL ENGINEERING)

Time: 3 Hours

Max.Marks:75

Section – A (Short Answer type questions)**(25 Marks)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. What do you mean by supercharging and turbocharging in automobile?	CO1	L1	2M
2. Give comparisons of front wheel drive and rear wheel drive in front engine mounted chassis.	CO1	L2	3M
3. What is the purpose of ignition coil and ignition condenser in ignition system?	CO2	L2	2M
4. Differentiate between battery and magneto coil ignition system.	CO2	L1	3M
5. List the main elements of transmission system and also state their function.	CO3	L1	2M
6. Differentiate cone clutch and disc clutch.	CO3	L2	3M
7. What are the main functions of steering and suspension systems?	CO4	L2	2M
8. Define following steering geometry: i) Camber ii) Caster iii) King pin inclination.	CO4	L1	3M
9. What are the needs of alternate fuels and describe the various types of alternate fuels for auto engines.	CO5	L2	2M
10. What is the function of brake? Also, give classification of different types of brakes.	CO5	L1	3M

Section B (Essay Questions)**Answer all questions, each question carries equal marks.****(5 x 10M = 50M)**

11. A) Define the term "Automobile" and give the detail classification of automobiles.	CO1	L2	10M
OR			
B) Draw a layout of an automobile. State the function of main components of an automobile.	CO1	L2	10M
12. A) Explain functions of battery ignition systems with neat sketch.	CO2	L2	10M
OR			
B) Describe with sketch the electronic ignition system using contact triggers.	CO2	L2	10M
13. A) What are the various defects in clutch? Show methods to rectify same.	CO3	L3	10M
OR			
B) Explain the working of sliding mesh gearbox with neat sketch.	CO3	L3	10M

14. A) Discuss in detail the Ackermann steering mechanism. CO4 L2 10M
OR
B) State the advantages and disadvantages of independent suspension over rigid axle type suspension. CO4 L2 10M
15. A) Explain with neat sketches of hydraulic brake system. CO5 L2 10M
OR
B) Write merits and demerits of hydrogen and biomass as an alternative energy source. CO5 L2 10M