G.R. No.		PAPER CODE	U483-262D (RE)

May 2023 (ENDSEM) EXAM
B. TECH. (Mechanical) (AY 2022-23 SEMESTER - II)
COURSE NAME: Automobile Engineering
COURSE CODE: MEUA40182D
(PATTERN 2018)

Time: [1Hr]   [Max. Marks: 30]

(*) Instructions to candidates:
1) Use of scientific calculator is allowed
2) Use suitable data where ever required
3) All questions are compulsory

Question No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) Describe the forces acting on the tire with the help of neat sketch?	[4]	[4]	[1]
	b) Discuss the different thread pattern in the tire according to their shape?	[6]	[4]	[2]
	OR			
	c) Compare constructional aspects of radial and bias ply tires according to their thread pattern?	[6]	[4]	[2]
Q.2	a) Illustrate the general description of vehicle movement with the help of neat figure?	[4]	[5]	[1]
	b) Solve the equation for maximum acceleration and maximum tractive effort for front wheel drive?	[6]	[5]	[3]
	OR			
	c) Identify and explain different aerodynamic moment and forces on the vehicle also mention necessary equations?	[6]	[5]	[3]
Q.3	a) Illustrate second wave of active safety system and briefly discuss?	[4]	[6]	[2]
	b) Develop the different design stages for safety/Ergonomic in the passenger car?	[6]	[6]	[3]
	OR			

	c) Examine how three-way catalytic converter will clean the dirty exhaust from the engine with the help of neat sketch?	[6]	[6]	[3]

Note: [BT Level 1: knowledge 2: Understand 3: Apply 4: Analyze 5: Evaluate 6: Create]