

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2021

Course: Automobile Engineering (MEAD 3010)

Semester: VI

Program: B.Tech. Mechanical

Time: 3 Hours

Max. Marks: 100

SECTION A

Note: All the questions are compulsory

S. No.		Marks	CO
Q-1	State the function of a starter.	5	CO1
Q-2	State the purpose of shock absorbers used in suspension systems.	5	CO1
Q-3	How many types of brakes are used in automobiles?	5	CO1
Q-4	What are the types of steering mechanism used in Indian vehicles?	5	CO1
Q-5	State the purpose of front and rear universal joints.	5	CO1
Q-6	List different types of gear boxes.	5	CO1

SECTION B

Q-7	What do you understand by chassis and frame? OR What do you understand by unitized chassis and what are its advantages over a conventional chassis?	10	CO2
Q-8	Describe the working of the telescopic damper with the help of a suitable diagram.	10	CO2
Q-9	Compare helical/coil springs torsion bars and leaf springs used in suspension.	10	CO2
Q-10	Why are parking brakes always separate from the regular braking system?	10	CO2
Q-11	What is Ackerman principal and explain it in detail?	10	CO2

SECTION C

Q 12	Describe the MacPherson strut assembly of independent suspension system. Compare it with the double wish bone suspension system. OR Sketch the air brake system of a heavy vehicle and describe how it works.	20	CO3
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