Roll No_____ **ID:181763/171763/121763/31763**

Branch: Mechanical Engineering
Semester: 6th
Subject Name: Automobile Engineering

Time Allowed : 3 Hrs. **MM:100**

Section –A

Note: Multiple Choice questions. All questions are compulsory. 10x1=10

Q.1 Automobile cannot be classified based on which of the following parameter? (CO1)
a) Fuel Used
b) Model
c) Drive
d) Body

Q.2 Which of the following is not a part of the transmission system? (CO2)
a) Clutch
b) Wheels
c) Gear box
d) Axles

Q.3 What is the function of the alternator? (CO5)
a) Recharging the Battery
b) Voltage Regulator
c) Auto-ignition
d) None of the above

Q.4 Which of the following parts does not include an automobile chassis? (CO1)
a) Differential
b) Brakes
c) Steering system
d) Shock absorbers

Q.5 Where is the differential located? (CO2)
a) Between transmission and rear axle
b) Between engine and transmission
c) Between two propeller shaft
d) Between steering wheel and steering column

Q.6 What is the need of the universal joint? (CO2)
a) To change inclination
b) To bend sideways
c) To transfer torque at an angle
d) To change length

Q.7 If the front of the front wheels is inside and rear of front wheels are apart when the vehicle is at rest, then the configuration is called? (CO3)
a) Toe-in
b) Toe out
c) Positive camber
d) Positive castor

Q.8 What is the use of the hot-wire sensor in ECM module? (CO1)
a) To measure temperature
b) To measure the smoke intensity
c) To measure the mass flow rate
d) To measure pressure

Q.9 What is the colour of a positive plate of a lead-acid battery? (CO5)
a) White
b) Grey
c) White
d) Brown

Q10 Which of the following parts of the cover assembly that hold the pressure plate against the clutch plate? (CO2)

a) Springs
b) Thrust bearings
c) Struts
d) Lever

Section-B

Note: Objective type questions. All questions are compulsory. 10x1=10

Q.11 Expand ECM. (CO1)
Q.12 What is the function of torque converter? (CO2)
Q.13 Define Toe-in (CO3)
Q.14 What is the need of brake adjustment? (CO4)
Q.15 What is the specific gravity of a fully charged battery? (CO5)
Q.16 Define hybrid vehicles. (CO1)
Q.17 What is the function of regulators in automobile? (CO5)
Q.18 Define bleeding of brakes. (CO4)
Q.19 Which acid is used in batteries? (CO5)
Q.20 Modern vehicles have positive earthing system. (True/false) (CO5)

Section –C

Note: Short answer type Questions. Attempt any twelve questions out of fifteen questions. 12x5=60

Q.21 Write short note on development of Automobile. (CO1)
Q.22 Discuss the Governing of Fuel in automobile. (CO1)
Q.23 Explain the working of single plate clutch with the help of simple diagram. (CO2)
Q.24 Write short note on auto transmission. (CO2)
Q.25 What are various types of rear axles? (CO2)
Q.26 Explain the types of wheels. (CO1)
Q.27 Write short note on Ackerman steering. (CO3)
Q.28 Explain working of Hydraulic Brake with diagram. (CO4)
Q.29 What is specific gravity of electrolyte? What is the effect of temperature on it? (CO5)
Q.30 Explain working of shock absorber with diagram. (CO3)
Q.31 Write short note on hybrid vehicles. (CO1)
Q.32 Explain the working of dynamo. (CO5)
Q.33 Write short note on rotation of tyres. (CO3)
Q.34 Explain the procedure of adjustment of head lights. (CO5)
Q.35 Write and explain the chemical reactions in batteries. (CO5)

Section-D

Note: Long answer questions. Attempt any two questions out of three questions. 2x10=20

Q.36 Classify Steering gears. Explain any two with the diagrams. (CO2)
Q.37 a) Explain the working of ABS system (CO3)
b) Write short note on servicing of 2 wheeler.
Q.38 Explain the construction and working of a differential with a neat sketch. (CO2)

Note: Course Outcome (CO) mentioned in the question paper is for official purpose only.