

- Q.24 Explain multi-point fuel injection system.
 Q.25 Explain the function of Universal Joint.
 Q.26 Explain the different resistances faced by a vehicle.
 Q.27 What is wheel balancing? What are its types?
 Q.28 Explain any steering gear with help of neat sketch.
 Q.29 Explain wheel alignment procedure.
 Q.30 Explain the layout and main parts of air braking system.
 Q.31 Write the name of different types of suspension springs.
 Q.32 Write the advantages of air springs.
 Q.33 What is ignition system? Explain battery ignition system in detail.
 Q.34 Explain the working of lead acid battery.
 Q.35 Explain the construction of cut out relay.

SECTION-D

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

- Q.36 What is Differential? Explain its Principle, Construction and Working.
 Q.37 Explain the principle and working of vacuum brakes with diagram.
 Q.38 Explain the construction and working of shock absorber.

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5th Sem / MSIL (Mechanical Engineering)
Subject:- Automobile Engineering

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Which of the following is a classification of automobiles based on Load?
 a) Heavy transport vehicle (HTV)
 b) Sedan Hatchback car
 c) Four wheeler vehicle
 d) Front-wheel drive
 Q.2 Which of the following type of load is supported by an automobile frame?
 a) Torque from engine and transmission
 b) Sudden impacts from collisions
 c) Weight of the body, passengers and cargo loads
 d) All of the mentioned
 Q.3 Which of the following parts does not include an automobile chassis?
 a) Differential b) Brakes
 c) Steering system d) Shock absorbers

- Q.4 If there are 7 clutch plates in a multi-plate clutch, what is the number of pair of contact surfaces?
 a) 5 b) 4
 c) 6 d) 8
- Q.5 What is the angle between the steering axis and the vertical in the plane of the wheel?
 a) Castor
 b) Camber
 c) Steering axis inclination
 d) kingpin inclination
- Q.6 The service brakes employed in cars are generally operated
 a) mechanically b) hydraulically
 c) pneumatically d) none of these
- Q.7 On what principle does the braking system in the car work?
 a) Frictional force b) Gravitational force
 c) Magnetic force d) Electric force
- Q.8 What is the angle between the vertical when the top of the wheel slants outwards?
 a) Negative camber b) Negative castor
 c) Positive camber d) Positive castor
- Q.9 The negative plates of a lead acid battery has
 a) lead peroxide (PbO_2)
 b) spongy lead (Pb)
 c) lead sulphate ($PbSO_4$)
 d) sulphuric acid (H_2SO_4)

Q.10 Which of the following is found in an automobile's electrical system?
 a) Lighting systems b) Battery
 c) Alternators d) All of the mentioned

SECTION-B

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

Q.11 Define body of an automobile.

Q.12 Define nozzle.

Q.13 Write function of clutch.

Q.14 Define Tractive effort.

Q.15 Define beads.

Q.16 What is king pin Inclination?

Q.17 Describe camber.

Q.18 Define wind up.

Q.19 Define un sprung weight.

Q.20 Define specific gravity of an electrolyte.

SECTION-C

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

Q.21 Write the name of Auto mobile a manufactures (2 wheels) in India and their brand.

Q.22 Name major units of chassis and show by diagram.

Q.23 Draw and explain single overhead CAM.