

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

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- 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.

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