

- Q.23 Enlist the various components of Transmission system
- Q.24 Explain CRDI system in automobiles.
- Q.25 Write the functions of transmission system.
- Q.26 What is universal joint? Explain its function.
- Q.27 What are the requirements of a good steering system?
- Q.28 What is the function of clutch. List the different types of clutches.
- Q.29 Define Toe-in and Toe-out.
- Q.30 Explain the layout and main parts of air braking system.
- Q.31 Write the advantages of air springs.
- Q.32 Explain briefly semi elliptic leaf spring.
- Q.33 Explain the various parts of a shock absorber.
- Q.34 Explain magneto ignition system.
- Q.35 Write the functions of electrical system in an automobile.

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 Ackerman Steering mechanism with the help of neat sketch.
- Q.38 Explain the construction and working of Mechanical Brake.

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MSIL-121763/131743

5th Sem / Mech. Engg. (MSIL) 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 automobile has two/four doors?
- Convertible
 - Special purpose vehicles
 - Pickups
 - Sedan
- Q.2 The temperature of the piston will be more at _____ in an automobile engine.
- The piston rings
 - The piston walls
 - The crown of the piston
 - The skirt of the piston
- Q.3 In which of the gearbox sun and planet gear set is used?
- Constant-mesh gearbox
 - Sliding mesh gearbox
 - synchromesh gearbox
 - Epicyclical gearbox

- Q.4 Where is the overdrive located?
- Between transmission and engine
 - Between transmission and rear axle
 - Between transmission and propeller shaft
 - Between transmission and differential
- Q.5 What is the angle between the steering axis and the vertical in the plane of the wheel?
- Castor
 - Camber
 - Steering axis inclination
 - Kingpin inclination
- Q.6 What is the name of the angle through which the wheel has to turn to sustain the side force?
- Slip angle
 - Castor angle
 - Camber
 - Kingpin inclination
- Q.7 In Diesel engines, during suction stroke, _____ is drawn in the cylinder.
- Air and Fuel
 - Only air
 - Only fuel
 - None of these
- Q.8 Leaf spring absorb shocks by
- twisting
 - compression
 - bending
 - tension
- Q.9 What gets deposited on the plates of a discharged lead-acid battery?
- PbO_2
 - Pb_2O_4
 - Pb
 - $PbSO_4$

- Q.10 What is the function of the alternator?
- Recharging the battery
 - Voltage Regulator
 - Auto-ignition
 - None of the above

SECTION-B

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

- Q.11 Write the name of main components of an automobile.
- Q.12 Give full form of MPFI
- Q.13 What is the function of tie rod?
- Q.14 Describe wheel balancing.
- Q.15 Define steering system.
- Q.16 Define caster.
- Q.17 Define sprung weight.
- Q.18 What is the value of king-pin inclination.
- Q.19 Define specific gravity.
- Q.20 Describe Primary cell of battery.

SECTION-C

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

- Q.21 Write the history and development of automobile.
- Q.22 Write the name of Automobile's manufactures (4 wheels) in India and give location of their manufacturing unit.