Q.25 Explain construction of constant mesh gear box system.
Q.26 Explain the function of differentisal.
Q.27 Compare tubed tyres and tubeless tyres.
Q.28 Explain toe-in and toe-out.
Q.29 Explain the working of mechanical brakes.
Q.30 Explain the lay out of air braking system.
Q.31 Write the functions of suspension system.
Q.32 Write the advantages of air springs.
Q.33 Write the functions of shock absorber.
Q.34 Write the functions of electrical system in an automobile.
Q.35 Explain the construction of lead acid battery.

SECTION-D

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

Q.36 Describe with neat sketch the working of sliding Mesh Gear Box.
Q.37 What is Steering Mechanism? Describe Ackerman Steering system with neat sketch.
Q.38 Explain voltage regulator and current regulator with the help of neat sketch.

Roll No. .....

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?
a) Convertible
b) Special purpose vehicles
c) Pickups
d) Sedan

Q.2 The correct flow of power through the drive train is
a) engine - driveshafts - clutch - mainshaft - countershaft - final driven gear - wheels
b) engine - clutch - mainshaft - countershaft - final driven gear - driveshafts - wheels
c) engine - clutch - countershaft - mainshaft - final driven gear - driveshafts - wheels
d) engine - mainshaft - countershaft - clutch - final driven gear - driveshafts - wheels

Q.3 Which of the following is not a part of the transmission system?
a) Clutch b) Wheels
c) Gear box d) Axles

Q.4 The component that connects the steering rack to the knuckles is

a) tie-rod b) sector gear
c) pivot d) spline

Q.5 Where is the clutch located?

a) Between transmission and engine
b) Between transmission and rear axle
c) Between transmission and propeller shaft
d) Between transmission and differential

Q.6 What is the purpose of the reciprocating ball type steering gear?

a) To reduce the operating cost
b) To reduce the number of parts
c) To reduce the operating friction
d) To reduce the toe-out during the turns

Q.7 What is a condition called when the vehicle will try to move away from its normal direction and to keep it on the right path there is need to steer a little?

a) Understeer b) Oversteer
c) Reversibility d) Irreversibility

Q.8 Generally which brakes are on the front wheels?

a) Drum brake b) Disk brake
c) Shoe brake d) Double shoe brake

Q.9 The battery is an electrochemical device, which means battery

a) makes chemical by mechanical means
b) uses chemical action to provide electricity
c) has curved plates instead of flat plates
d) does not use an electrolyte

Q.10 What is the function of the alternator?

a) Recharging the Battery
b) Voltage Regulator
c) Auto-ignition
d) None of the above

SECTION-B

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

Q.11 Define chassis of an automobile.
Q.12 Give full form of C.R.D.I.
Q.13 Define gear box.
Q.14 What is rear wheel drive?
Q.15 Define tyre.
Q.16 Write principle of power steering.
Q.17 What is purpose of brakes?
Q.18 Define spring rate.
Q.19 Define sprung weight.
Q.20 Name two basic ignition systems.

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 Define automobile. Name its different components. Explain briefly.
Q.23 With neat sketch, explain MPFI system.
Q.24 Explain Gravity type Fuel Feed System.