Q.26 Explain the construction of alkaline batteries. (CO2)
Q.27 Write the advantages and disadvantages of alternators. (CO2)
Q.28 Explain the construction of starting motor. (CO5)
Q.29 Explain the working of Fuel gauges system. (CO3)
Q.30 Write about horn relay and wind screen wipers. (CO4)
Q.31 Describe the working of regulators for alternators. (CO4)
Q.32 Define engine drive and their types. (CO4)
Q.33 Enlist the different types of fuses used in lighting system wiring. (CO1)
Q.34 Explain the working of Lithium ion battery. (CO2)
Q.35 Write the function of double filament in automobiles lighting circuit. (CO1)

SECTION-D

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

Q.36 Explain the construction and working of Lead acid battery with the help of diagram. (CO3)
Q.37 Draw and explain the block diagram of control area network in automobiles. (CO2)
Q.38 Draw and explain the wiring diagram of two wheeler. (CO1)

(**Note:** Course outcome/CO is for office use only)

Roll No. .....

Electrical Engg.
Subject:- Auto Electrical

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 In Battery coil ignition system, the correct sequence of flow of current is (CO5)
a) Battery - Ammeter - Ignition coil- Distributor- Spark plug.
b) Battery - Ignition coil - Ammeter - Distributor - Spark plug.
c) Battery - Ammeter - Distributor - Ignition coil - Spark plug.
d) Battery - Distributor - Ammeter - Ignition coil- Spark plug

Q.2 The capacity of battery is usually expressed in terms of (CO1)
a) volts b) amperes
c) weight d) ampere hours

Q.3 The positive plates of a lead acid battery has (CO2)
a) Lead peroxide (PbO_2)
b) Spongy lead (Pb)
c) Lead sulphate ($PbSO_4$)
d) Sulphuric acid (H_2SO_4)

Q.4 The main task of a battery in automobiles is to (CO4)

a) Supply electricity to the alternator
b) Act as a reservoir or stabilizer of electricity
c) Supply electricity to the vehicle's electrical system at all times while the engine is running
d) Supply a large amount of power to turn the starter motor when the engine is being started

Q.5 With the increase of battery temperature, the specific gravity of electrolyte (CO3)
a) Increases b) Decreases
c) Remains the same d) None of these

Q.6 When a lead acid battery is in fully charged condition the colour of its positive plate is (CO5)
a) Dark green b) Brown
c) Dark brown d) None of the above

Q.7 Trickle charger of a storage battery helps to (CO5)
a) Maintain proper electrolyte level
b) Increase its reverse capacity
c) Prevent sulphation
d) Keep it fresh and fully charged

Q.8 Dynamo in automobile is a (CO4)
a) Series generator b) Shunt generator
c) either (a) and (b) d) none of above

Q.9 In an alternator, which component controls the output? (CO3)
a) voltage regulator b) cut out relay
c) current regulator d) diode

Q.10 At the start of the engine, the charging voltage is _____. (CO2)
a) lower b) higher
c) same d) zero

SECTION-B

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

Q.11 Name the two electrical component used in automobile. (CO4)

Q.12 Define battery efficiency. (CO2)

Q.13 Name the electrolyte used in lead acid batteries. (CO3)

Q.14 Which instrument used for testing the electrolyte of battery. (CO3)

Q.15 Enlist the battery charging methods. (CO5)

Q.16 Write the meaning of sedimentation. (CO1)

Q.17 Write the one purpose of cut out relay. (CO3)

Q.18 Name the types of starter motor. (CO5)

Q.19 Define wiring harness. (CO4)

Q.20 Write one function of warning light.

SECTION-C

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

Q.21 Enlist the electronics equipment/components used in automobile. (CO4)

Q.22 Define charging system and enlist the components of the charging system in vehicles. (CO5)

Q.23 Write a short note on (CO3)
a) battery rating b) temperature

Q.24 Explain the procedure of electrolyte testing of a battery. (CO3)

Q.25 Describe the working of constant current charging method of battery. (CO5)