Scheme – I Sample Question Paper:

Programme Name : Automobile Engineering
Programme code : AE
Semester : VI Sem
Course Title : Autotronics
Marks : 70

22654

Time: 3Hirs.

Instructions:

(1)All questions are compulsory.

(2)Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Assume suitable data if necessary.

(5)Preferably, write the answers in sequential order.

Q.1) Attempt any FIVE of the following.

(10 Marks)

- a) Enlist two types of diodes used in Automotive Electronics.
- State four types of Computer Memories used in Automotive applications.
- c) State the name of the sensor used in measurement of vehicle speed.
- d) Name the two types of computer controlled fuel injection systems used in modern vehicles.
- e) Give an example of particular DTC code found in vehicle diagnosis.
- Draw symbol of Photo-Diode.
- g) Identify the name of a communication system used for navigation purpose in modern automobiles.

O.2) Attempt any THREE of the following.

(12 Marks)

- a) Draw block diagram of digital visual display in vehicle instrumentation.
- b) Convert the given decimal number 100.5 into binary number.
- Sketch and explain signal conditioning system used for oxygen sensor.
- d) Compare open loop and closed loop control system in automotive application.

Q.3) Attempt any THREE of the following.

(12 Marks)

- a) Illustrate with neat sketch the output signal waveform for Crank shaft position sensor.
- b) Draw block diagram of GDI system.
- Describe stand alone diagnosis procedure of coolant temperature sensor.
- d) Construct a block diagram for Common Rail Direct Injection system used in modern vehicles.

Q.4) Attempt any Three of the following.

(12 Marks)

- a) Explain with justification the use of Bluetooth technology as a communication system in automobiles.
- b) Answer the following (Refer Figure)

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