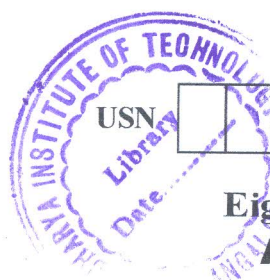


CBCS SCHEME



17MT81

Eighth Semester B.E. Degree Examination, July/August 2021 Automotive Electronics and Hybrid Vehicles

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Briefly explain the major components of IC Engine. (10 Marks)
b. Explain with a neat sketch working of spark plug with high voltage circulate. (10 Marks)
- 2 a. With a neat sketch, explain the Fuel system for petrol engine. (10 Marks)
b. Define Drive train; with a neat sketch explain torque converter. (10 Marks)
- 3 a. With a neat sketch, explain the working of oxygen sensor. (10 Marks)
b. Briefly explain Manifold Absolute Pressure sensor with neat diagram. (10 Marks)
- 4 a. Define actuator. Explain with working of Ignition actuator with neat sketch. (10 Marks)
b. Briefly explain evaporative emission system. (10 Marks)
- 5 a. With a neat sketch explain Measurement of Speed and oil pressure. (10 Marks)
b. Explain communication systems used in Automobiles. (10 Marks)
- 6 a. With a Schematic diagram, explain remote keyless entry. (10 Marks)
b. Explain briefly segments of GPS architecture. (10 Marks)
- 7 a. With a neat sketch explain Automotive Cruise Control System. (10 Marks)
b. Briefly explain on – Board Diagnostics System (OBD). (10 Marks)
- 8 a. With a neat sketch, explain ABS system. (10 Marks)
b. Write a short notes on :
i) Expert system ii) Engine Analyzer. (10 Marks)
- 9 a. Briefly explain series Hybrid Vehicles and parallel Hybrid vehicles. (10 Marks)
b. Explain various components of Electric Hybrid Vehicles. (10 Marks)
- 10 a. Explain characteristics and advantages of plug – in HEV. (10 Marks)
b. Explain the working of Lead acid Battery in Electric vehicles. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.