

Th-2 AUTOMOBILE ENGINEERING & HYBRID VEHICLES

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
 - a. What is Air Fuel ratio?
 - b. What is the need of a Differential?
 - c. Define Automobile.
 - d. What is the function of a Spark Plug?
 - e. What is an Electric Vehicle? Give two examples.
 - f. Which types of batteries are used in an Electric Vehicle?
 - g. Name various types of Fuel cells.
 - h. What is the need of braking system in automobile?
 - i. How ignition takes place in petrol engine?
 - j. What do you mean by Carburetion process?

2. Answer **Any Six** Questions 6 x 5
 - a. Write down the advantages of Hydraulic Brake.
 - b. State the layout of Automobile chassis with major components.
 - c. Differentiate between Sliding mesh and Synchromesh gear box.
 - d. Differentiate between Hybrid Vehicle and Electric Vehicle.
 - e. Explain the common ignition troubles and its remedies.
 - f. With a help of neat sketch, show the pump circulation system of water cooling.
 - g. What are components of Transmission system? Explain in brief.

3. Describe the lubrication system of I.C engine. 10
4. Describe the working principle of Fuel Feed Pump with neat sketch. 10
5. Describe the working of Single Plate Clutch with neat sketch. 10
6. Describe constructional features and working of a Telescopic Shock Absorber. 10
7. Describe the working principle of fuel injection system for multi cylinder (in-line) engine. 10