

CBCS SCHEME

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15AU562

Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020 Alternative Energy Sources for Automobiles

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Discuss the need of alternative fuels for automobiles. (08 Marks)
b. What are your views on the road maps given for alternative fuels? (08 Marks)

OR

- 2 a. Classify solar radiation measuring instruments. Explain any one instrument with sketch. (08 Marks)
b. Explain the principle of photo voltaic power generation. Discuss the parameters affecting the performance. (08 Marks)

Module-2

- 3 a. With a neat sketch explain Chinese design biogasplant. (08 Marks)
b. List the factors affecting biodigestion and explain any two. (08 Marks)

OR

- 4 a. Compare the properties of methanol and gasoline as engine fuels. (08 Marks)
b. List out the advantages and disadvantages of butanol. (08 Marks)

Module-3

- 5 a. Describe the method of hydrogen production by electrolysis of water. (08 Marks)
b. What are the different methods of storage of hydrogen? Explain any two. (08 Marks)

OR

- 6 a. List some of the important properties of CNG. Explain applications of natural gas. (08 Marks)
b. Explain advantages and disadvantages of LNG. (08 Marks)

Module-4

- 7 a. Describe the production of CWS fuel. (08 Marks)
b. List the advantages and limitations of emulsified fuels. (08 Marks)

OR

- 8 a. Explain the properties of Ammonia and write its applications. (08 Marks)
b. What is the water car? How does it work? (08 Marks)

Module-5

- 9 a. Explain the advantages and limitations of electric vehicle. (08 Marks)
b. With a neat sketch, explain the transmission system of Hybrid vehicle. (08 Marks)

OR

- 10 a. Write the advantages and disadvantages of duel fuel engine. (08 Marks)
b. What are the emission benefits of dual fuel technology? (08 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.