



VI SEMESTER B.TECH END SEMESTER EXAMINATIONS, JUNE 2017

SUBJECT: (OE II) INTRODUCTION TO ALTERNATIVE FUELS AND APPLICATIONS [MME 3285]

REVISED CREDIT SYSTEM

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitably assumed.

- 1A. Explain the need for alternative fuels. (03)
- 1B. How alternative fuels are better than petro-fuels. Explain. (04)
- 1C. Discuss the properties of biodiesel, merits and demerits. (03)

- 2A. What are the different techniques of utilizing alternative liquid fuels? (03)
- 2B. What are the benefits of blending of liquid fuels in case of SI engines? (03)
- 2C. Explain the storage and safety issues of alcohols. (04)

- 3A. Discuss the different techniques for the utilization of alternative liquid fuels in CI engines. (04)
- 3B. Discuss the types and uses of fuel emulsions. (03)
- 3C. Explain the importance of preheating of vegetable oils. (03)

- 4A. Discuss in detail the importance of CNG from an Indian perspective. (04)
- 4B. What are the advantages and disadvantages of Producer gas? (03)
- 4C. What are the benefits using hydrogen in SI engines (03)

- 5A. How gaseous fuels are used in CI engines? Explain. (03)
- 5B. Explain the emission characteristics of a LPG fueled CI engine. (02)
- 5C. List the advantages and drawbacks of hybrid vehicles. (02)
- 5D. Explain the working of fuel cell vehicles. (03)