B.TECH IN MECHANICAL ENGINEERING (BTMEVI)

Term-End Examination

December, 2013

BIMEE-023 : COMBUSTION ENGINEERING

Time : 3 hours   *Maximum Marks : 70*

Note : (i) *All the questions are to be answered in English Language only*

(ii) *Attempt **any five** questions*

1. (a) Briefly explain the principal of fluegas analysis with the help of neat sketch ?   7

    (b) Explain combustion of fuels and method, of calculation of the oxygen.   7

2. (a) Define Thermodynamic cycle. Explain any one with neat sketch.   7

    (b) Define I.C. Engine. How they are classified ? Explain any one with neat sketch.   7

3. (a) Explain the principal of battery ignition system with neat sketch.   7

    (b) Compare any two ignition system with merits and demerits.   7

4.   (a)   Briefly explain the working of C.I. Engine   7
with neat sketch.

        (b)   Compare S.I. Engine with C.I. Engine. Also   7
indicate their applications.

5.   (a)   What are the main Polutants emitted by   7
Petrol engine?

        (b)   What are the causes of formation of Nox in   7
diesel Engine?

6.   (a)   What are the factors affecting knocking in   7
CI engine and how to control it ?

        (b)   Briefly explain valve timing diagram for four   7
stroke diesel engine.

7.   (a)   Explain various reasons for hydrocarbon   7
emissions in SI engines.

        (b)   Explain how NOx emission is controlled in   7
CI engines.

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