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Roll No .....

**ME - 604****B.E. VI Semester**

Examination, December 2015

**Internal Combustion Engines****Time : Three Hours****Maximum Marks : 70**

**Note :** Attempt five questions, one questions (including-all parts) from each unit. All questions carry equal marks. Assume suitable data or dimensions if necessary, clearly mentioned it.

1. a) Discuss the difference between theoretical and actual valve timing diagrams of a diesel engine.
- b) Draw and explain the performance characteristics of SI engine.

Or

2. a) Discuss the factors which affecting the volumetric efficiency of IC engine.
- b) Compare the relative advantages and disadvantages of four stroke and two stroke cycle engines.

3. a) Explain briefly combustion phenomenon in SI engines.
- b) What is ignition lag? Discuss the effect of engine variables on ignition lag.

Or

4. a) Write the difference between pre-ignition, auto-ignition and detonation.
- b) Explain the phenomenon of knocking in SI engines. What are the different factors which influence the knocking.

5. a) Discuss the various factors which affects combustion in CI engines.
- b) Discuss salient features of various types of combustion chambers.

Or

6. a) Explain the phenomenon of knock in CI engines and compare it with SI engine knock.
- b) Explain briefly various phases of CI engine combustion.

7. a) Give the classification of engine.
- b) What are the differences between direct injection and indirect injection.

Or

8. a) What do you mean by 'air injection' and 'solid injection'?
- b) State the advantages and disadvantages of hydrogen as IC engine fuel.

9. a) What are the basic types of carburetors? Explain in brief.
- b) Explain briefly supercharging of CI-engines.

Or

10. a) Discuss the low and high pressure super-charging.
- b) Explain briefly the types of super charging arrangements.

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