Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (E-I 2011 Onwards) (Sem.–6)

IC ENGINES

Subject Code : DE/ME-1.1

Paper ID : [A2365]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Q1 Answer briefly :

a. Draw actual and theoretical valve timing diagram of two stroke petrol engine.

b. Define ultimate analysis and proximate analysis of coal.

c. What are the major difficulties to be faced if a single jet carburetor is used?

d. What are the advantages of liquid fuel over solid fuel?

e. Draw the stages of combustion in S.I. engines with the help of p-θ diagram.

f. Why ignition lag should be minimum?

g. Enlist different types of combustion chambers.

h. How the I.P. of a multi-cylinder engine is measured?

i. What is the need of heat balance sheet for I.C. engines?

j. Briefly explain sterling cycle.

SECTION-B

Q2 Discuss the method used for finding the calorific value of gaseous fuel.

Q3 Explain the governing mechanism of I.C. engines.

Q4 Explain and draw dual cycle.

Q5 Explain theoretical and actual p-v diagram of four stroke diesel engine.

Q6 What is petrol injection? Explain the working of petrol injection system for multi-cylinder engine.

SECTION-C

Q7 Explain the effects of operating variables on cycle analysis.

Q8 Explain the performance characteristics of S.I. engines.

Q9 Discuss the different methods of supercharging used in practice. List out merits and demerits of each method.