

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. Sem. – IInd - Examination – June/July- 2011****Subject code: 1721105****Subject Name: High Speed Diesel Engine****Date: 04/07/2011****Time: 10:30 am – 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) Give Explanation of deviation of actual cycle from air standard cycle? **07**

(b) Write short note on combustion chamber requirements. **07**

Q.2 (a) Describe factors affecting in delay period. **07**

(b) Write short note on pre-combustion chamber. **07**

OR

(b) Enlist types of injection nozzle. Explain any one of them with neat sketch. **07**

Q.3 (a) Describe fuel injector with neat sketch. **07**

(b) Write short note on Air cell combustion chamber. **07**

OR

Q.3 (a) Explain phenomenon of combustion in diesel engine. **07**

(b) Explain the effect of time losses on P-V diagram. **07**

Q.4 (a) What are the three methods of generating swirl in C.I. Engine Combustion chamber? Explain any one of them. **07**

(b) Explain necessity and limitations of Turbo charging of diesel engine. **07**

OR

Q.4 (a) Write short on M-Combustion chamber. **07**

(b) What is super charging? Explain merits and limitations of super charging. **07**

Q.5 (a) What are the various methods of turbo charging? Explain any one of them with neat sketch. **07**

(b) Write short note on multi fuel engines. **07**

OR

Q.5 (a) Explain latest development in combustion chamber design. **07**

(b) Explain special features of agricultural and industrial engines. **07**
