Seat No.:	Enrolment No
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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

M. E. - SEMESTER – II • EXAMINATION – WINTER • 2014

Subject code: 1721105 Date: 05-12-2014

**Subject Name: High Speed diesel Engine** 

Time: 02:30 pm - 05:00 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)	What is important of compression ratio in case of high speed diesel engine; explain in detail with necessary graph?	07
	<b>(b)</b>	Discuss in detail various stages of combustion with diagram?	07
Q.2	(a) (b)	Discuss combustion chamber requirement and air motion in combustion chamber?  Discuss latest combustion chamber used in automobile?  OR	07 07
	(b)	Describe in detail Air cell and energy cell combustion chamber	07
Q.3	(a) (b)	Illuminate distributor type fuel pump? Why nozzle is needed? Give types of it for high speed diesel engine with diagrams?  OR	07 07
Q.3	(a) (b)	Give important of nozzle cooling and spray characteristics? What is injection timing? Discuss its effect on high speed diesel engine?	07 07
Q.4	(a) (b)	Describe in detail Supercharging methods? What is turbocharger? Discuss selection of turbocharger?  OR	07 07
Q.4	(a)	Explain necessity of super charging in case of high speed diesel engine and its limitation?	07
Q.4	(b)	Give and explain Method of turbocharging in case of high speed diesel engine in detail?	07
Q.5	(a) (b)	Explain maintenance of high speed diesel engine in detail?  Discuss cooling of different components of high speed diesel engine?  OR	07 07
Q.5	(a)	Explain concept of multi fuel engine in detail?	07
	(b)	Describe Special feature of agricultural and industrial engine?	07

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