Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –IIst SEMESTER–EXAMINATION – JULY- 2012

Subject code: 1721105 **Date: 12/07/2012**

Subject Name: High speed Diesel Engine

Time: 10:30 am – 13:00 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)	Discuss compression ratio for DI and IDI Engine? Compare DI and IDI Engine?	07
	(b)	Explain various stage of combustion for HSDE?	07
Q.2	(a)	Discuss Induction swirl, compression swirl, and combustion swirl?	07
	(b)	Explains relation between swirl ratio and fuel consumption with help of diagram? Also explain Why glowing device use?	07
		OR	
	(b)	Explain latest Development in combustion chamber?	07
Q.3	(a)	Enlist types of injection nozzle? Explain any one of them with neat sketch	07
	(b)	Explain combustion phenomenon in HSDE?	07
		OR	
Q.3	(a)	Write short notes on M- Combustion chamber?	07
	(b)	Explain Distributor pumps in detail?	07
Q.4	(a)	Explain limitation of super charging in case of HSDE and advantages of the super charging for HSDE?	07
	(b)	What do you mean by Turbocharging? Explain its principal? Why turbo charger with intercooler is used? Give exact location of inter cooler?	07
		OR	
Q.4	(a)	Emission omitted by Variable compression ratio is law, Give supporting reasons?	07
	(b)	Explain Effect of time losses on P-V diagram?	07
Q.5	(a)	Explain special features of agricultural and industrial Engine?	07
	(b)	Write short notes on multi fuel engine?	07
		OR	
Q.5	(a)	Discuss four valve engine and OHC engine in short?	07
	(b)	Explain MPFI technology?	07

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