Seat No.:	Enrolment No.
Deat 110	Emonient 110.

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016

Subject Code: 2721105			Date: 31/05/2016	
Tir	-	Name: High Speed Diesel Engine 0:30 am to 01:00 pm Total Marks:	70	
		Attempt all questions. Make suitable assumptions wherever necessary.		
Q.1	(a)	What do you mean by combustible mixture and give its range in terms of air /fuel ratio.	07	
	(b)	Define dissociation. Explain its effect on brake power developed by IC engine.	07	
Q.2	(a)	Define supercharging. Discuss different methods of supercharging used in practice.	07	
	(b)	Define Turbo Charging. What are the different methods of Turbo- charging? OR	07	
	(b)	Define adiabatic flame temperature, enthalpy of formation, enthalpy of reaction.	07	
Q.3	(a)	Explain delay period in diesel engine combustion and factors to reduced delay period.	07	
	(b)	Working of Energy cell combustion chamber for CI engine with neat sketch. OR	07	
Q.3	(a) (b)	Discuss compression ratio for DI & IDI engine. Compare DI & IDI engine. Explain working of VCR engine with neat sketch.	07 07	
Q.4	(a)	Combustion phenomena of CI engine with P - Θ diagram.	07	
	(b)	Why air swirl is required in CI engine. Explain different methods for air swirl for CI engine	07	
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Q.4	(a) (b)	Explain pre- combustion chamber working. Explain working of multi fuel engine. State significance of pilot fuel injection.	07 07	
Q.5	(a) (b)	Explain Working of jerk type fuel pump with neat sketch. Assumption made in Air standard cycle. Effect of variation of specific heat on Otto cycle with PV diagram.	07 07	
Q.5	(a) (b)	OR Explain stratified charge engine with diagram. Application of CI engine as special features of agricultural.	07 07	
