Seat No.:	Enrolment No

GUJARAT TECHNOLOGICAL UNIVERSITY

		BE - SEMESTER-VI- EXAMINATION – SUMMER 2016	
Su	bject	Code:161902 Date:21/05/201	.6
Su	biect	Name:Internal Combustion Engines	
	•	0:30 AM to 01:00 PM Total Marks:	70
	tructio		, 0
		Attempt all questions.	
		Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	
Q.1	(a)	Describe the simple mechanical governor used for C.I. Engines.	07
	(b)	Define super charging of an I.C. Engine. What are its objectives.	07
Q.2	(a)	What are the basic requirements of good combustion chamber? How can these be achieved?	07
	(b)	What do you mean by valve timing diagrams? Explain valve lead, valve lag, valve overlap period.	07
		OR	
	(b)	Explain the construction and operation of a simple carburetor with the help of diagram.	07
Q.3	(a)	Explain the following terms related to surface ignition-	07
		(I) Pre-ignition	
		(II) Run-on	
		(III) Run-away	
		(IV) Wild ping (V) Rumble	
	(b)	What is the function of carburetor? What is carburetion?	07
	(0)	OR	07
Q.3	(a)	What are the criteria for the selection of I.C. engine fuels?	07
	(b)	What do you understand by knock in I.C. engine? Explain this phenomenon? How does the knock in S.I. engine differ from the knock in C.I. engine.	07
Q.4	(a)	What are the advantages & disadvantages of using gaseous fuels in I.C. engine?	07
	(b)	Explain the stages of combustion in the S.I. engine with the help of a P- Θ Diagram. OR	07
Q.4	(a)	What are the major pollutants from the exhaust of gasoline & diesel engines? What are the detrimental effects of these pollutants?	07
	(b)	Describe the construction & working of a fuel injector nozzle with the help of diagram.	07
Q.5	(a) (b)	Describe the working principle of an electronically controlled fuel injection system. Describe the construction of a jerk pump type fuel injection pump.	07 07
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OR

Q.5	(a)	What are the main components required in a fuel injection system?	07
	(b)	Explain the importance of engine testing.	07
