Enrolli	ment No:		am Seat No			
		HAH UNI				
	Sumn	ner Examin	ation-2	016		
Subjec	t Name : Automobile Eng	ines				
Subjec	Subject Code: 4TE04AEN1		Branch: B.Tech (Automobile)			
Semest Instruct		Time :2:30 To	5:30	Marks:70		
(1) (2) (3)	Use of Programmable calc Instructions written on ma Draw neat diagrams and fi Assume suitable data if ne	in answer book are igures (if necessary)	strictly to be	obeyed.		
Q-1	Attempt the following	questions:			(14	
1	The brake thermal effic (a) 40-50% (c) 25-30%	tiency for SI engine (b) 45-6 (d) 80-	50%			
2	The process of increasing the density of air before it enters the engine cylinder is known as					
	(a) Scavenging(c) knocking	(b) Sup (d) Pref	er charging neating			
3	In a carburetor, the level of the fuel in the float chamber as compared to the level of the main jet in the venturi is (a) Same (b) Higher (c) Lower (d) None of the above					
4	A Pintaux nozzle is (a) Simple hole noz (c) Nozzle having a		(b) Multi he (d) The san	ole nozzle ne as Pintle nozzle		
5		The sparking voltage of the spark plug is (a) 6 to 12 V (b) 80-90 V (c) 10 to 450V (d) 8kV to 15kV				
6	In a diesel engine the do (a) Physical delay (c) Ignition delay	(b) C	start of injec hemical delay eriod of igniti	ý		
7	Rope brake dynamomer (a) Brake power (c) Fuel used	(b) Vo	nine: olumetric effi ir : Fuel ratio	•		

Page 1 || 3



	8)	(a) 7:1 (b) 10:1 (c) 12:1 (d) 22:1	
	9)	EGR system is employed for controlling emissions of (a) HC (b) CO (c) NO (d) HC and CO	
	10)	In carburetor fuel supply throttle valve controls the supply of (a) Air only (b) Fuel only (c) Air fuel mixture (d) none of the above	
	11)	Indication of ignition quality of a diesel fuel is given by (a) Detonation (b) Octan number (c) Preignition (d) Cetane number	
	12)	From the oil pump the oil directed to (a) Oil gallery (b) Oil strainer (c) Oil filter (d) Main bearing	
	13)	The thermostat valve starts to open about (a) 90°C (b) 80°C (c) 20°C (d) 50°C	
	14)	Firing order of a 6- cylinder in line engine is usually (a) 1-5-3-6-2-4 (b) 1-6-3-5-2-4 (c) 1-4-3-2-6-5 (d) 1-3-6-2-4-5	
Atten	npt any fo	our questions from Q-2 to Q-8	
Q-2	(a) (b)	Attempt all questions Draw actual valve timing diagram of SI engines. Give reasons for early opening of exhaust valve and late closing of inlet valve. Compare SI engine with CI engines as the following points are concerned: (a) Method of Ignition (b) Method of Fuel supply (c) Method of Governing	
Q-3	(a) (b)	Attempt all questions Explain with neat sketch MPFI System. Explain working of fuel injector with the help of neat sketch.	(14 (07 (07
Q-4	(a) (b)	Attempt all questions Explain working of battery ignition system with the help of neat sketch. Explain with neat sketch the combustion phenomenon in C.I. engine. Which	(14 (07 (07

Q-5

(a)

(b)

Attempt all questions

one lubrication system with sketch.



phase of combustion in C I engine need for attention to be paid and why?

Enlist types of lubrication system use in C I engine and discuss working of any

Draw the thermostatic controlled water cooling system and explain its working.

(07)

(14)

(07)

(07)



Q-6		Attempt all questions	(14)
	(a)	Discuss effects of super charging on SI and CI engines.	(07)
	(b)	Discuss factors effecting on detonation in SI engines.	(07)
Q-7		Attempt all questions	(14)
	(a)	Draw and Explain working of Simple carburetor.	(07)
	(b)	Discuss HC and CO emission from SI engines.	(07)
Q-8		Attempt all questions	(14)
	(a)	Explain infrared absorption gas analyzer for measuring CO.	(07)
	(b)	Describe how is the I.P. of multi cylinder engine measured?	(07)

