Enrollment No:	Exam Seat No:
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C.U.SHAH UNIVERSITY

Winter Examination-2015

Subject Name: Automobile Systems

Subject Code: 4TE04ASY1 Branch: B.Tech (Auto)

Time: 2:30 To 5:30 Semester: 4 Date: 23/11/2015 Marks:70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.

	Attempt the following questions:	
1)	Which of following is mounted between engine and gear box? (a) Propeller shaft (b) Clutch (c) Differential (d) cooling fan	
2)	Removing of trapped air from braking system is known as (a) Skidding (b) Bleeding (c) Tapping (d) Trapping	
3)	If brake wheels get locked before the vehicle is said to be (a) Slipping (b) skidding (c) Rolling (d) Sliding	
4)	Number of plies in truck tyre is usually (a) 2-4 (b) 5-8 (c) 8-10 (d) 16-20	
5)	Device Used for smoothing out power of I.C. engine is (a) Clutch (b) Crank shaft (c) Flywheel (d) Cam shaft	
6)	What term is used to cover all the components which are fitted between engine and road wheels? (a) Power drive (b) Final drive (c) Transmission (d) brake	
7)	Common clutch used between engine and gear box is (a) Dog (b) Cone (c) Dry frication (d) Multi plate	
8)	Vehicle with automatic transmission system connects engine with gear box using (a) Plate clutch (b) Dog clutch (c) Friction clutch (d) Fluid clutch	



	9)	Purpose of double declutching when changing down is to (a) Speed up layshaft (b) slow down layshaft (c) Speed up main shaft (d) Slow down main shaft	(01)
	10)	The crown wheel and pinion is called (a) Differential (b) Rear axle (c) Final drive (d) Rear drive	(01)
	11)	Type of hub used in heavy vehicles is (a) Fully floating (b) Semi- floating (c) Three quarter floating (d) Quarter	(01)
	12)	Which of one following frame section offers highest resistance to torsion? (a) Flat (b) Box (c) Tubular (d) channel	(01)
	13)	On a beam axle, the stab axle pivots about a (a) King pin (b) Ball joint (c) Track rod (d) Stub axle	(01)
	14)	Function of stabilizer in automobile is to decrease tendency to (a) Roll (b) Pitch (c) Dip (d) Yaw	(01)
Atten	npt any fo	our questions from Q-2 to Q-8	
Q-2		Attempt all questions	(14)
	(a)	Give the classification of Auto Vehicles?	(07)
	(b)	Draw the layout of conventional Chassis and explain about various parts on it?	(07)
Q-3		Attempt all questions	(14)
	(a)	Describe centrifugal and semi centrifugal clutch.	(07)
	(b)	Describe construction and explain working of fluid flywheel.	(07)
Q-4		Attempt all questions	(14)
	(a)	Mention types of manual gear box. Explain working and construction of constant	(07)
		mesh gear box with sketch.	
	(b)	Write a brief note on Continuously Variable Transmission (CVT).	(07)
Q-5		Attempt all questions	(14)
	(a)	Explain rear axle shaft supporting of 1. Semi floating 2. Three quarter floating.	(07)
	(b)	Draw a complete assembly of steering system and explain how a steering system works.	(07)
Q-6		Attempt all questions	(14)
	(a)	Explain following terms: Toe-in and Toe-out, King pin inclination	(04)
	(b)	Write in brief steering gear box.	(05)
	(c)	Explain with neat sketch telescopic shock absorber	(05)

(01)



Q -7		Attempt all questions	(14)
	(a)	Explain with neat sketch Drum brake	(07)
	(b)	What is ABS? Explain working of ABS with neat sketch.	(07)
Q-8		Attempt all questions	(14)
	(a)	Explain construction feature of tubeless tyre and give advantages of tube less tyre over convention tyre.	(07)
	(b)	Discuss in brief factors effecting tyre life,	(07)

