Seat No.

Time: 2 Hours	Auto Transmission

Subject Code

V 3 2 3

Total No. of Questions: 5 (Printed Pages: 4) Maximum Marks: 50

INSTRUCTIONS: (i) All questions are compulsory.

- (ii) Answer each question on a fresh page.
- (iii) Write the number of each question and sub-question clearly.
- (iv) Figures to the right indicate full marks.
- 1. (A) Answer the following questions in *one* sentence each:
 - (i) What is the purpose of cushion spring in the clutch plate of single plate clutch?
 - (ii) What is the advantage of using thrust washer in the Differential unit?
 - (iii) State any two advantages of spokes type of wheel.
 - (iv) Name different types of shackles used in the suspension system.
 - (v) List out the components of mechanical braking system. 1
 - (vi) State any two disadvantages of hydraulic braking system. 1

[V-323] 1 P.T.O.

	(B)	(i)	Draw a neat labelled sketch of the Diaphragm Clutch.	2
		(ii)	What is the purpose of providing more number of clutch plat	tes
			in the multiplate clutch ?	2
2.	(A)	Ansv	ver the following questions in short:	
		(i)	Explain the working of centrifugal clutch.	2
		(ii)	Define the term "Gradient Resistance".	2
		(iii)	Give functions of Gear Box. (any four)	2
	(B)	(i)	Draw a neat labelled sketch of the Constant Velocity University	sal
			Joint.	2
		(ii)	Distinguish between Hotchkiss Drive and Torque Tube Driv	ve.
			(any four points)	2
3.	(A)	Ansv	ver the following questions in short:	
		(i)	Why Styrene Butadiene rubber is preferred in the mode	rn
			tyres ?	2
		(ii)	Write a short note on the vehicle chassis.	2
		(iii)	State any four functions of the frame of the vehicle.	2
	(B)	(i)	Draw a neat labelled sketch of the semi-floating axle.	2
		(ii)	Explain the constructional details of the Differential unit of	fа
			Car	2

[V-323] 2

4.	(A)	Ansv	ver the following questions in short:	
		(i)	Give the constructional details of the conventional leaf sp	ring
			type suspension system.	2
		(ii)	Define the following terms:	
			(a) Camber Angle	1
			(b) Castor angle	1
		(iii)	State any four advantages of 'Rack and Pinion' Steen	ring
			Gear.	2
	(B)	(i)	Draw a neat labelled sketch of the wishbone type independ	dent
			suspension system.	2
		(ii)	State any four requirements of the suspension system.	2
5.	(A)	Ansv	ver the following questions in short:	
		(i)	Explain Disc-brake of an Automobile.	2
		(ii)	What is the function of "Check Valve" in the mas	ster
			cylinder ?	2
		(iii)	What is the purpose of providing Synchronizing device in	the
			gear box ?	2

3

P.T.O.

[V-323]

(B)	(i)	Draw a neat labelled sketch of the Worm an Roller Steering
		Gear Box.
	(ii)	State the functions for the following components of the Steering
		System.
		(a) Steering Gear Box
		(b) Drop Arm or Pitman Arm

[V-323] 4