

Roll No \_\_\_\_\_

Examination May-2014

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**B. Tech.**

Automotive Transmissions

Paper Code: E-303

Paper ID-A0714

Time: 03 Hours

Max. Marks: 60

Note: The question paper consists of *three sections*. **Section A** is compulsory. Candidates are required to attempt any four questions from **Section-B** and any two questions from **Section-C**.

Q. No.	Section-A	Marks
1(a)	What do you mean by transmission?	2x10=20
(b)	Draw a sketch of a typical scooter clutch?	
(c)	What do you mean by gear ratio?	
(d)	State the principle of a fluid coupling?	
(e)	Name the various types of hydrostatic drive systems?	
(f)	What do you mean by Turbo charger?	
(g)	What do you mean by actuation system?	
(h)	Name the various components of an electric system in a vehicle?	
(i)	What are the functions of gear box in vehicles?	
(j)	Name the car which is on hybrid system?	
	<b>Section-B</b>	<b>5x4=20</b>
2	Draw a neat labeled diagram of rear engine rear wheel drive type of vehicle layout?	
3	Explain the construction and operation of a helical spring clutch with a neat sketch?	
4	Distinguish between dry and wet clutches?	
5	Draw a neat sketch of torque converter and explain how it achieves variation in torque?	
6	Explain the need of differential action in an auto rickshaw	
	<b>Section-C</b>	<b>10x2=20</b>
7	Explain the Janny hydrostatic transmission with a sketch?	
8	Describe Toyota 'ECT-i' automatic transmission system?	
9	Write short note on <u>any two</u> of the following	
(a)	Hydraulic clutch	
(b)	Transaxles	
(c)	Torque capacity	

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