Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER-IV • EXAMINATION - SUMMER • 2014

		ME - SEMESTER-IV • EXAMINATION – SUMMER • 2014	
		ubject Code: 741101 Date: 04-06-2014 ubject Name: Hydraulic and Pneumatic Systems in Automotive Vehicles	
	Ti	me: 02:30 pm - 05:00 pm Total Marks: 70	
		 Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 	
Q.1	(a) (b)	Comparison between Hydraulic and Pneumatic system or circuit. What is the role of filter in hydraulic and pneumatic system? List the different types.	07 07
Q.2	(a) (b)	List five applications of fluid power in automobile industry. Explain any one in detail. What are the types and advantages of hose in hydraulic circuits?	07 07
	(b)	State the role of a pump in a hydraulic system. Classify pumps and explain with a neat sketch the working of positive displacement pump.	07
Q.3	(a) (b)	Enlist important points for maintenance of hydraulic system. State the various physical characteristics of hydraulic oil. OR	07 07
Q.3	(a)	Classify air compressors. What is its function in pneumatic system? Write selection criteria for air compressors in pneumatic systems.	07
	(b)	Write a short note on: pressure regulator in a pneumatic system.	07
Q.4	(a) (b)	Draw and explain in short (i) poppet valve (ii) spool valve. Explain various methods of cylinder mounting/ mounting arrangement. OR	07 07
Q.4	(a) (b)	What is contamination of hydraulic system? Enlist causes of contamination. Explain with neat sketch the working of relief valve in pneumatic system.	07 07
Q.5	(a) (b)	Explain 12 steps to troubleshooting pneumatic systems. Describe components of an electro-hydraulic servo system. OR	07 07
Q.5	(a) (b)		07 07
