Seat No.:	Enrolment No.

Subject Code: 740901

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER-IV • EXAMINATION- WINTER • 2015

Date: 05/12/2015

•		ne: Fluid Drives and Control PM TO 5:00 PM Total Marks: 70	
Instruc			
	2. Make	npt all questions. e suitable assumptions wherever necessary. res to the right indicate full marks.	
Q.1	(a) (b)	State advantages and disadvantages of hydraulic system. "Knowledge of Fluid drives is very important to a design engine in the field of mechanical engineering" – Justify the statement.	07 07
Q.2	(a)	What are the functions of hydraulic oil used for power transmission?	07
	(b)	Discuss which properties are required for fulfillment the functions. Why do you prefer the reciprocating pumps over rotary pumps? With the help of a neat sketch, explain the working principal of an Inline Pump. Explain the features of its construction in the light of working principal.	07
		OR	
Q.3	(b)	What is the need for temperature compensation in a flow-control valve?	07
	(a)	Write a short note on External Gear Pump.	07
	(b)	Explain hydraulic press with equivalent circuit. OR	07
Q.3	(a) (b)	With neat sketch explain various Center Condition of 4 Way DCV. Explain the construction and operation of piston-type accumulators.	07 07
Q.4			
	(a) (b)	Write a note on Hydraulic Reservoir. Explain effects of solid particles present in oil on hydraulic system. Give significance of filtration and explain economics. OR	07 07
Q. 4	(a)	Differentiate between hydraulic motors and hydraulic pumps. Explain Gerotor Motor.	07
	(b)	Compare electro hydraulic servo valves with proportional hydraulic valves.	07
Q.5			
-10	(a) (b)	Explain sequence circuit with neat diagram. Draw the symbol FRL unit and explain its role in pneumatic system. OR	07 07
Q.5	(a)	How is the unloading valve different from a pressure relief valve?	07
	(b)	Explain briefly the function of DCVs.	07
