Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV EXAMINATION - WINTER 2015

Subje	ect (Code: 142302 Date:30/12/2015	
•		Name: Plastic Industrial Hydraulics and Pneumatics	
_		:30pm to 05:00pm Total Marks: 70	
Instru		<u>-</u>	
		Attempt all questions.	
		Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	
0.1	(a)	What are the advantages and disadvantages of Hydraulic systems?	07
Q.1	(a) (b)	Explain about the different packing and sealing elements used in Hydraulic	07
	(0)	systems.	U/
		systems.	
Q.2	(a)	Define hydraulic pump. Explain about working of a balanced vane pump	07
~ ·-	(44)	with the help of a sketch.	٠.
	(b)	Describe External gear motor with the help of a suitable sketch.	07
	` '	OR	
	(b)	What are the different types of reservoir designs? Explain about any one.	07
Q.3	(a)	Define Hydraulic valve. Explain about meter in flow control with the help	07
		of a circuit diagram.	
	(b)	•	07
		help of a sketch.	
0.3	()	OR	۰.
Q.3	(a)		07
	(b)	unloading valve.	07
	(b)	What are the applications of sequence valve?	07
Q.4	(a)	What is an accumulator? Explain about working of Spring loaded	07
Ų.Ŧ	(a)	accumulator.	U1
	(b)	Describe double acting pressure intensifier with the help of a sketch.	07
	(2)	OR	0.
Q.4	(a)	What are the applications of servo valves in industry?	07
		Classify compressor. Explain about any one.	07
Q.5	(a)	What is the working principle of FRL Unit? Explain about different Parts	07
		of FRL Unit.	
	(b)	Explain about any one pneumatic circuit with the help of a diagram.	07
		OR	
Q.5	(a)	1 3	07
	(b)	· · · · · · · · · · · · · · · · · · ·	07
		i) Pressure Relief Valve, ii) Pressure Reduction Valve,	
		iii) Unloading valve, iv) Check Valve, v) Filter,	
		vi) Pump Fixed displacement bi-directional.	
