Seat No.:		
Seat No.:		

Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV • EXAMINATION - SUMMER 2013

•		Code: 142302 Date: 12-06-2 Name: Plastic Industrial Hydraulics and Pneumatics	013
•	: 10:	:30am – 01:00pm Total Marks	: 70
	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	What are the functions of a Reservoir? List out the components of a	07
	(b)	Reservoir? Explain about any two. What is the purpose of Heat Exchanger? What is the difference between Static & dynamic seal? Why are backup rings used with Orings?	07
Q.2	(a)		07
	(b)	Balanced Vane pump. Explain the working of external gear motor with the help of a suitable sketch.	07
	a >	OR	
	(b)	What is pressure compensation? Explain about By-pass Type pressure compensated flow control.	07
Q.3	(a)	Explain about the construction and operation of Pilot operated sequence valve.	07
	(b)	What are the different methods to actuate direction control valves? Explain about any one.	07
0.2	(a)	OR Define Accumulator and Pressure Intensifier. What are the applications	07
Q.3	(a)	of Accumulators? Explain about any one.	07
	(b)	Define Servo Valve. How the mechanical type servo valve works?	07
Q.4	(a)	What are the different parts of an air compressor? Explain about the working of piston compressors.	07
	(b)	What are the applications of Pneumatics? OR	07
Q.4	(a)	Where to locate filters in a Hydraulic system & Why?	07
	(b)	What is the principle of Hydraulic Jack? Explain with a suitable example.	07
Q.5	(a)	Draw the symbols for the following Hydraulic Elements: 1) Hydraulic line, 2) Hydraulic Flow, 3) Pneumatic Flow, 4) Reservoir	07
	(b .)	Pressurized, 5) Spring, 6) Push Button, 7) Electric Motor. Explain about any two requirements of Hydraulic oil	Λ7
	(b)	Explain about any two requirements of Hydraulic oil. OR	07
Q.5	(a)	Draw the symbols for the following Hydraulic Elements:	07
		1) Double End Hydraulic cylinder, 2) Pressure Reducing Valve, 3) Sequence Valve 4) Piston Pump with Drain.	
	(b)	Explain about working Principle & construction of FRL Unit.	07

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