GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–IV EXAMINATION – SUMMER 2016

Subject Code:142302   **Date:03/06/2016**
Subject Name:Plastics Industrial Hydraulics And Pneumatics
Time:10:30 AM to 01:00 PM   **Total Marks: 70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	What are the advantages and disadvantages of hydraulic systems?	**07**
	(b)	What are the different parts of a reservoir? Mention their function.	**07**
Q.2	**(a)**	Define hydraulic pump. Classify hydraulic pumps. Explain about working of axial piston pump.	**07**
	(b)	Describe the working of vane motor with the help of a sketch.	**07**
		OR	
	(b)	Write a short note on sequence valve. Mention its applications.	**07**
Q.3	**(a)**	Explain about the working of one way direction control valve.	**07**
	(b)	Explain about Bleed off flow control circuit with help of sketch.	**07**
		OR	
Q.3	**(a)**	Describe the working of a gas charged accumulator with the help of a sketch.	**07**
	(b)	What is the purpose of pressure intensifier? What are the applications of pressure intensifier in Hydraulic systems?	**07**
Q.4	**(a)**	Define pascal's law. Explain about principle of hydraulic jack.	**07**
	(b)	What are the applications of pneumatics in Plastic processing equipments?	**07**
		OR	
Q.4	**(a)**	What are the applications of Filter, Regulator, Lubricator unit?	**07**
	(b)	Describe the flow control circuit of Hydraulic system.	**07**
Q.5	**(a)**	Define compressor. What are the different types of compressor? Explain about any one.	**07**
	(b)	Explain about the mechanism of servo valves with the help of a sketch.	**07**
		OR	
Q.5	**(a)**	Describe the working of a compound pressure relief valve with the help of a sketch.	**07**
	(b)	Draw the symbols for the following Hydraulic elements.	**07**

i) Reservoir Vented,   ii) Accumulator spring loaded,
iii) Hydraulic Cylinder, single acting,   iv) Variable displacement pump,
v) Temperature indicator,   vi) Working line,   vii) Strainer.

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