Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–V(NEW) EXAMINATION – SUMMER 2022

Subject Code:3151913   **Date:02/06/2022**
Subject Name:Oil Hydraulics And Pneumatics
Time:02:30 PM TO 05:00 PM   **Total Marks: 70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

			MARKS
Q.1	(a)	State the merits of hydraulic system.	03
	(b)	Explain Brahmas press with help of sketch.	04
	(c)	Differentiate hydraulic, electric, pneumatic systems.	07
Q.2	(a)	Draw ISO/ANI symbol of single acting cylinder, FRL, 4/2 DCV	03
	(b)	Explain function of filter	04
	(c)	Write short note on contaminations.	07
		OR	
	(c)	Explain pump cavitation	07
Q.3	(a)	Give bifurcation of pumps used in hydraulic systems.	03
	(b)	Discuss advantages of wobble pump.	04
	(c)	Short note: Screw type hydraulic pump.	07
		OR	
Q.3	(a)	List out accessories of reservoirs.	03
	(b)	Discuss functions of heating and cooling devices.	04
	(c)	Short note : Spool type DCV	07
Q.4	(a)	Explain basic steps for circuit design	03
	(b)	Draw basic circuit for operating single acting hydraulic cylinder	04
	(c)	Explain and develop double pump hydraulic circuit	07
		OR	
Q.4	(a)	Write advantages of automation	03
	(b)	Draw basic circuit for operating double acting pneumatic cylinder	04
	(c)	Explain and develop pneumatic circuit for OR logic	07
Q.5	(a)	List components used in single acting pneumatic cylinder.	03
	(b)	Sketch actuation of rotary actuator	04
	(c)	Draw neat sketch of hydraulic reservoir. State and explain its functions in detail.	07
		OR	
Q.5	(a)	Explain time delay valve.	03
	(b)	Explain meter in circuit.	04
	(c)	Develop Hydraulic circuit for AND logic.	07

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