

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III (NEW) EXAMINATION – WINTER 2023

Subject Code:3132305

Date:25-01-2024

Subject Name:Hydraulics & Pneumatics in Plastic Industry

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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) State Bernoulli's principle with equation.	03
	(b) State Pascal's law & its applications with any one example.	04
	(c) Enlist components used in hydraulic system with detailed explanation.	07
Q.2	(a) List disadvantages of Hydraulic system	03
	(b) Explain working of Gear pump	04
	(c) Explain Vane pump in detail with neat sketch.	07
	OR	
	(c) Explain in detail about ideal characteristic require for Hydraulic oil.	07
Q.3	(a) Write short notes on Packing and Seals	03
	(b) List out each of any three Symbols of Hydraulics and Pneumatics.	04
	(c) Write short note on I) Injection Control Circuit and II) Pre fill Circuit.	07
	OR	
Q.3	(a) List the different types of Accumulators.	03
	(b) Write short notes on Relief Valve.	04
	(c) Explain construction and working of Radial Piston Pump with neat sketch.	07
Q.4	(a) Compare: Filters and strainers	03
	(b) Explain in brief: Reservoir	04
	(c) Explain briefly about Components of Pneumatic System with neat sketches.	07
	OR	
Q.4	(a) Explain about Packing and seals in brief.	03
	(b) Explain the working principle of the Vane pump along with a suitable sketch.	04
	(c) List advantages and disadvantages of Hydraulics.	07

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| Q.5 | (a) | Define Check Valve. Give classification of check valve | 03 |
| | (b) | List the types of connectors. Explain any anyone in brief. | 04 |
| | (c) | Explain in detail hydraulic motors with a suitable diagram. | 07 |
| | | OR | |
| Q.5 | (a) | Give classification of valves. | 03 |
| | (b) | Compare: Hydraulics and Pneumatics | 04 |
| | (c) | Draw and Explain Deceleration circuit | 07 |
