Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020
Hydraulics and Pneumatics

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions, selecting atleast TWO questions from each part.*

PART – A

1	a.	Define Pascal's law. Explain application of Pascal's law.	(10 Marks)
	b.	Describe the structure of a hydraulic control system.	(10 Marks)
2	a.	Explain Single acting cylinder and Double acting cylinder with diagrams.	(10 Marks)
	b.	i) Mention the factors influencing selection of pump.	
		ii) Write any 5 symbolic representations of hydraulic actuators.	(10 Marks)
3	a.	Explain Pilot operated DC values.	(10 Marks)
	b.	Write any 5 symbols of DC valves and show their physical action explanation.	(10 Marks)
4	a.	What is an Accumulator? Explain any two types.	(10 Marks)
	b.	Explain Meter – in and Meter – out circuit.	(10 Marks)

PART – B

5	a.	Mention properties of fluid. Explain them.	(10 Marks)
	b.	What is Contaminant? Explain types , sources and effect of contaminants.	(10 Marks)
6	a.	Define Pneumatic system. Write its advantages , limitations and applications.	(10 Marks)
	b.	What is Rodless Cylinder? Explain its two types.	(10 Marks)
7	a.	Explain Construction and working of Poppet valve.	(10 Marks)
	b.	What is the function of time delay valve? Explain its construction features.	(10 Marks)
8	a.	Write the application of Relay and Contactors.	(10 Marks)
	b.	Explain steps involved in preparation of compressed air.	(10 Marks)

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