

CBCS SCHEME

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BMR405D

Fourth Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025 Hydraulics and Pneumatics

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	With a neat sketch explain the components of fluid power system.	10	L2	CO1
	b.	List and explain the advantage and applications of fluid, power system.	10	L1	CO1
OR					
Q.2	a.	With a neat block diagram explain the vane pump.	10	L2	CO2
	b.	Sketch and explain the external gear pump.	10	L2	CO1
Module – 2					
Q.3	a.	Differentiate between single acting and double acting cylinders.	10	L2	CO2
	b.	With a neat sketch explain the vane motor.	10	L2	CO1
OR					
Q.4	a.	Write the classification of direction control valves. Explain any two of them.	10	L2	CO1
	b.	With a neat sketch explain the pilot operated pressure relief valve.	10	L2	CO2
Module – 3					
Q.5	a.	Design and explain the regenerative circuit for hydraulic cylinder.	10	L3	CO3
	b.	Sketch and explain any two types of accumulators.	10	L2	CO2
OR					
Q.6	a.	Design and explain fail safe circuit.	10	L2	CO2
	b.	With a neat sketch explain the circuit diagram for By-pass control.	10	L3	CO3
Module – 4					
Q.7	a.	Explain the basic components of a pneumatic system.	10	L3	CO2
	b.	Sketch and explain the double acting pneumatic cylinder.	10	L3	CO3
OR					
Q.8	a.	Design a circuit diagram for pressure control reversal without limit switch.	10	L3	CO3
	b.	With a neat sketch explain the three stages of air preparation.	10	L2	CO4
Module – 5					
Q.9	a.	Describe the hydraulic and pneumatic power packs and explain its applications.	10	L2	CO3
	b.	Design and explain a hydraulic circuit for shaping operation.	10	L3	CO4
OR					
Q.10	a.	Design and example a hydraulic circuit for planning operation.	10	L3	CO4
	b.	Explain the trouble shooting in pneumatic system and state and remedies.	10	L2	CO4
