

Q.24 Discuss about Fluid power components in brief.  
(CO1)

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Q.25 Explain Working of Pneumatic power supply with its components.  
(CO2)

**4th Sem / Automation & Robotics**  
**Subject : Fluid Power Systems**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Which type of system uses 'oil under pressure' mean for power transmission? (CO2)

- a) Fluid power system
- b) Hydraulic system
- c) Pneumatic system
- d) Stepper motors

Q.2 The force developed in hydraulic systems is high due to \_\_\_\_\_ (CO2)

- a) high pressure      b) more oil
- c) less pressure      d) Less oil

Q.3 The compressed air flows to the actuator through \_\_\_\_\_ (CO2)

- a) pipes and valves      b) shafts
- c) motors      d) flow control valve

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Q.4	Newton is the unit of	(CO1)
	a) Force                          b) Flow	
	c) power                        d) energy	
Q.5	Watts is the unit of	(CO1)
	a) Force                              b) Flow	
	c) power                            d) energy	
Q.6	The rate of doing work is	(CO1)
	a) energy                            b) work	
	c) power                            d) torque	

## SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7	Define automation	(CO1)
Q.8	Define flow	(CO1)
Q.9	Define stepper motor	
Q.10	Define air filter	(CO3)
Q.11	Define oil reservoir	
Q.12	Define hydraulic system	(CO1)

## SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Discuss different gas laws. (CO1)
- Q.14 What do you mean by Industrial Prime Movers. (CO1)
- Q.15 Discuss about types of Hydraulic pumps in brief. (CO2)
- Q.16 How the air compressor works. (CO2)
- Q.17 Explain the working of rotary valve. (CO3)
- Q.18 Explain the functioning pilot operated control valve. (CO3)
- Q.19 What do you mean by servo valve. (CO3)
- Q.20 Explain the term fluid Power circuits in detail.
- Q.21 Explain the piston acceleration during working stroke (CO4)
- Q.22 What do you mean by sequencing operation of hydraulic system. (CO5)

## SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Explain the directional control of a single acting cylinder using push button operated 3/2 dc valve. (CO5)