

Place of computers used in today's world

[Technology](#), [Computer](#)



Explain with neat diagram. Discuss with neat diagram the working of non-return valve. (8) (8) 9. Design a suitable circuit. (I) Two hydraulic cylinders two work in sequence. An hydraulic cylinder is used for industrial application. It has been decided to use an accumulator as a leakage compensator. Design a circuit to fulfill these requirements. Name three speed control circuits? 2. What is the use of bleed-off circuit? 3. Name the important auxiliary components used in the hydraulic circuits?.

What are the factors to be considered while designing a hydraulic circuit? 5. What is the use of regenerative circuit? 6. What is automatic sequencing circuit? 7. What is a sequencing circuit? 8 Differentiate between hydraulic and pneumatic systems? 9. What is a fast exhaust valve? 10. What is the use of compressor? 11 . Name two basic types of compressors? ACE/Applied Hydraulics/SQUIBB 1 . I)Discuss the working principle of an air compressor (ii)Discuss the function of the FRR unit (8) (8) 2. (I)Explain the working of a pneumatic speed control circuit (ii)What is the time delay circuit?

Discuss with an example 3. (I)Describe the operation of an FRR trio unit (ii)Explain the ANSI symbols for all the types of actuators used in pneumatics , Quick exhaust valve and silencer 4. (I)Highlight the advantages of an air over oil circuit and explain with suitable applications (ii)Briefly explain on an electro hydraulic servo system used in industries 5. What is compressor? Explain the working principle of piston type compressor with neat sketch (16) 6. What is the synchronizing? Explain the synchronizing circuit with suitable approaches? (16) 7.) Draw the neat sketch of the pneumatic filter and explain its construction and working. Also give the graphical symbol (6) using limit switches and relays (10) 8. (I)Draw a neat sketch of an electro-hydraulic

for sequencing drilling and clamping cylinders (10) (ii) Explain the working principle of any two types of pneumatic position serving devices? (6) 9.

(I) Describe various pneumatic actuators with neat sketches? - (ii) Develop an electro pneumatic circuit for the following sequence A+B+A B where A B stand for cylinder (+) indicates extension and (-) indicates retraction of cylinders (12) ACE/Applied Hydraulics/SQUIBB 10.

Design an electro hydraulic circuit for the following sequences A+B+A-B- where A & B stand for cylinder (+) indicates extension and (-) indicates retraction of cylinders. Incorporate provision for auto-manual selector and emergency stop (16) 11. I) Explain with neat block diagram an air pilot control circuit for a double acting cylinder (8) it) Describe any one of the electro-hydraulic circuits used in robotic system. What is ladder diagram? . What is the advantage of using micro electronic control for fluid power compared to electro mechanical control? . What is PAL? 4. What are the basic elements of PAL? 5. What is fluids? 6 . What are the advantages of fluid elements? 7. Name the common methods used for designing logic circuits? 8. What is the difference between pressure switch and temperature switch? 9. How does a limit switch differ from a push button switch? 10. What is an elected relay? PART B I) Design of circuit with air pilot control of a double acting cylinder ii) Explain with a circuit diagram how is the control of an air motor is achieved.

A flow control valve used to adjust the speed of the motor (8) I) What is the selection criterion for pneumatic components? It) What are the factors considered during the installation of pneumatic system (6) iii) What are

advantages of using fluids system? ACE/Applied Hydraulics/SQUIBB 3. Three pneumatic cylinders A, B, C are used in an automatic sequence of operation. A cylinder extends, B cylinder retracts C cylinder retracts and then A cylinder retracts C cylinder extends and B cylinder extends Develop pneumatic circuits by cascade method Sketch also travel step diagram and briefly explain. 16))Briefly on the methodology adopted to install and maintain a pneumatic power pack.