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Question Paper Code: 55P03

M.E. DEGREE EXAMINATION, NOV 2018

Elective

CAD / CAM

15PCD503 - DESIGN OF HYDRAULIC AND PNEUMATIC SYSTEMS

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) (i) With neat sketch explain the construction and operation of an unbalanced type vane pump. CO1- U (10)
- (ii) With neat sketch explain the construction and operation of a balanced type vane pump. CO1- U (10)

Or

- (b) Write short notes on CO1- U (20)
- (i) Lobe pumps
 - (ii) Gerotor pump
 - (iii) Screw pump
2. (a) Explain the working principle of sequence valve with its application. CO2- U (20)

Or

- (b) List out the various types of hydraulic cylinders and explain the construction, parts and working of the double acting cylinder with neat sketch. CO2- U (20)

3. (a) Describe the hydraulic circuit used to control the motion of a hydraulic vertical milling machine. CO3- U (20)
- Or
- (b) Describe the hydraulic circuit used to control the motion of a hydraulic surface grinding machine. CO3- U (20)
4. (a) Explain the combinational circuit design with suitable example. CO4- U (20)
- Or
- (b) What are the different types of pneumatic switching elements are there .Explain them in detail. CO4- U (20)
5. (a) Explain the maintenance and troubleshooting of pneumatic systems in detail. CO5- U (20)
- Or
- (b) Explain the microprocessor construction and programming with neat sketch. CO5- U (20)
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