

Exam  
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## V.P. & R.P.T.P SCIENCE COLLEGE

### INTERANAL EXAM

#### T.Y.B.Sc.(SEM-V) INSTRUMENTATION (VOC.)

SUB: - Control system components

SUB CODE: US05CINV03

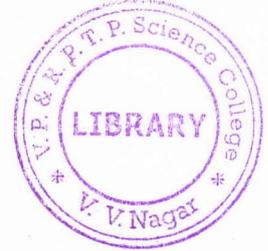
DATE:-05/10/2019

TIME: 11:00 am to 12:15 pm

MARKS-25

Q-1 Choose correct answer [05]

1. Which of the following is not a type of timing relay  
(A) ON delay relay (C) LATCHING  
(B) OFF delay relay (D) Period ON -OFF relay
2. Which is not advantage of stepper motor?  
(A) high speed limit (C) Precise monitoring  
(B) no contact brushes (D) None of above
3. Which of the following is not type of globe valve?  
(A) Single port valve (C) Three way valve  
(B) Angle valve (D) Butterfly valve
4. Contactors are preferred in application involving \_\_\_\_\_  
(A) Relay logic circuits (C) Low power applications  
(B) High switching Frequency (D) All of above
5. Spring less diaphragm actuator is a \_\_\_\_\_ actuator.  
(A) hydraulic (C) electrical  
(B) Pneumatic (D) electromechanical



Q-2 Explain electromagnetic relay's working principle, construction and working? [05]

OR

Q-2 Write short note on Solid State Relay. [05]

Q-3 Write short note on various elements of servo system. [05]

OR

Q-3 State working principle of stepper motor and explain working hybrid stepper motor. [05]

Q-4 With sketch explain various part of diaphragm valve. [05]

OR

Q-4 With sketch explain single and double port globe valve. [05]

Q-5 Explain hydraulic actuators' principle, construction and working in brief. [05]

OR

Q-5 Explain terms for control valve with justification like Range ability, turned out, Cv & Kv flow coefficient, pressure drop, specific gravity of fluid. [05]