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Automatic Control Systems MCQ Test

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Below is the **Automatic Control Systems MCQ test** that checks your basic knowledge of Automatic Control Systems. This **Automatic Control Systems MCQ Test** contains 20 Multiple Choice Questions. You have to select the right answer to the question. Finally, you can also take the Online Quiz from the Take **Automatic Control Systems Quiz** Button.

Q1. What is a stepper motor?

- A. It is a kind of rotating amplifier
- B. It is a two phase induction motor
- **C. It is an electromechanical device**
- D. It is an electromagnetic transducer

Q2. When a unit step voltage drives a lag network the output

- A. remains constant at unit step value
- B. decreases exponentially from 1 to 0
- **C. increases exponentially from zero to final value**
- D. None of the above

Q3. Bellows converts

- A. pressure difference into voltage
- **B. pressure difference into displacement**
- C. displacement into pressure difference
- D. None of the above

Q4. Stepper motors find applications in printers.

- **A. True**

- B. False

Q5. in control systems the magnitude of error voltage

- A. is very large
- **B. is very small**
- C. neither small nor large
- D. None of the above

Q6. Usually, What is the current rating of dc tachogenerator?

- **A. Small**
- B. Medium
- C. High
- D. None of the above

Q7. Does Lag compensation increase the bandwidth of the system?

- **A. Yes**
- B. No

Q8. What are the most commonly used devices for differencing and amplification, in control systems?

- A. FET amplifiers
- B. BJT amplifiers
- **C. Operational amplifiers**
- D. All of the above

Q9. In a second order system $\omega_n = 10$ rad/sec and $\zeta = 0.1$, then find the $\omega_d = ?$

- A. 1 rad/sec
- B. 9 rad/sec
- C. 9.1 rad/sec
- **D. 9.95 rad/sec**

Q10. Which of the following device is used for providing rate feedback voltage in position

control system?

- A. Potentiometer
- **B. Tacho generator**
- C. Synchro-transmitter
- D. Synchro-transformer

Q11. The relative stability of a system is given by which of the followings?

- A. Phase margin alone
- B. Gain margin alone
- **C. Both A & B**
- D. None of the above

Q12. Transport lag usually exists in

- A. Thermal systems
- B. Pneumatic systems
- C. Hydraulic systems
- **D. All of the above**

Q13. The entire damping comes from in the field controlled motor.

- A. Back emf
- B. Field resistance
- C. Armature resistance
- **D. Motor friction and load**

Q14. Integral control action

- A. Removes offset
- B. May lead to oscillatory response
- **C. Both A & B**
- D. None of the above

Q15. A system is highly oscillatory if gain margin is close to 1 or phase margin is zero.

- **A. True**

- B. False

Q16. Which of the following sensor is generally used in incremental optical encoder?

- A. LCD
- B. LED
- C. Photodiode
- D. None of the above

Q17. Magnetic amplifier is used for

- A. Power amplification
- B. Current amplification
- C. Voltage amplification
- D. Frequency amplification

Q18. Which of the following control action can never be used alone?

- A. Integral
- B. Derivative
- C. Proportional
- D. None of the above

Q19. Robotic manipulator arms mostly use

- A. Hydraulic actuator
- B. Electric motor actuator
- C. Pneumatic actuator
- D. None of the above

Q20. Mechanical impedance is the ratio of

- A. Rms force to rms velocity
- B. Rms force to rms displacement
- C. Rms velocity to rms displacement
- D. All of the above