

- Q.28 Write a short note on artificial neural network.
 Q.29 Explain any two non-linearities with diagram.
 Q.30 Explain briefly any one computational software.
 Q.31 Write differences between open and closed loop control system.
 Q.32 Explain split range control system with diagram.
 Q.33 Write five applications of artificial intelligence.
 Q.34 Write advantages of computational software's in control system.
 Q.35 Explain any one application of ratio control system.

SECTION-D

Note: Long Answer type question. Attempt any two questions. (2x10=20)

- Q.36 Write seven differences between linear and nonlinear control system.
 Q.37 Describe the concept of feed forward control system. Also write two advantages of it.
 Q.38 Explain the concept of Robotics in detail. Write five industrial application of Robotics.

b)

No. of Printed Pages : 4
 Roll No.....

181544/121544/31544

4th Sem / Instrumentation & Control Subject : Advanced Control System

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory. (10x1=10)

- Q.1 Artificial intelligence has its expansion in the following application.
 a) Planning and scheduling
 b) Game playing
 c) Robotics
 D) All of the above
- Q.2 For a linear system
 a) Output proportional to input
 b) Output inversely proportional to input
 c) Output = Input
 d) None of these
- Q.3 MATLAB is used for
 a) Analyse data
 b) Develop algorithms
 c) Matrix manipulations
 d) All are correct
- Q.4 Largest change in the input quantity for which there is no output of the instrument is known as

- a) Ratio control b) Linearity
c) Dead zone d) Accuracy
- Q.5 A system is said to be nonlinear, if it obeys the principle of
a) Superposition b) Homogeneity
c) Both A & B d) None of these
- Q.6 Ratio control is extensively used in
a) Distillation column b) Chemical processes
c) Reactor d) All are correct
- Q.7 Relay is an
a) Google device b) Electrical switch
c) Manual switch d) None of these
- Q.8 Limit cycle is a behaviour shown by
a) Linear system b) Nonlinear system
c) Signal flow graph d) Block diagram
- Q.9 Following are robotic arm configurations
a) Cartesian b) Cylindrical
c) Spherical d) All of these
- Q.10 Lab VIEW is commonly used for
a) Data acquisition
b) Industrial Automation
c) Control or monitoring a process
d) All of the above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Name two computational software.

- Q.12 Write two advantages of cascade control system.
- Q.13 In closed loop control system, feedback is absent (True/ False)
- Q.14 Expand ANN.
- Q.15 Saturation relates to nonlinear control system (True/ False)
- Q.16 Game playing is an application of _____.
- Q.17 Write two applications of Fuzzy Logic Control System.
- Q.18 Neuro-fuzzy system is a combination of _____.
- Q.19 Name two types of control system.
- Q.20 Voice recognition is an application of _____.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Write a short note on multiloop control system.
- Q.22 Explain the concept of Neuro Fuzzy Logic Control System.
- Q.23 Write about robot arm configuration.
- Q.24 Explain principle of superposition and homogeneity.
- Q.25 Write five differences between feedback and feed forward control system.
- Q.26 Explain block diagram of Fuzzy Logic Control System.
- Q.27 Explain inherent and intentional non linearity.