Q.29 Explain the concept of Artificial intelligence.

Q.30 Write Five applications of Robotics.

Q.31 Explain Fuzzy logic system.

Q.32 Discuss the future scope of Artificial intelligence.

Q.33 Write a short note of SCADA software.

Q.34 What do you mean by MATLAB?

Q.35 Explain the concept of degree of freedom.

Section-D

Note: Long answer questions. Attempt any two question out of three Questions. **(2x10=20)**

Q.36 Write eight differences between Linear and nonlinear control system with example.

Q.37 Describe the concept of cascade control system with suitable example.

Q.38 Explain in detail the Artificial neural network with applications.

4th Sem.   Branch : IC
Subject : Advanced Control System

Time : 3 Hrs.   M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. **(10x1=10)**

Q.1 Which control loop is best for handling disturbance in the plant?

a) Cascade   b) Feedback

c) Feed forward   d) Ratio

Q.2 At which place we use sensors in control loop?

a) Forward path   b) Feedback path

c) Both A & B   d) None of these

Q.3 Ratio control is a special type of _____ control.

a) Cascade   b) Feed back

c) Feed forward   d) Open loop

Q.4 The term back lash is associated with _____.

a) Servo motor   b) Induction relays

c) Gear trains   d) All Tacho generators

Q.5 Limit cycle is a behaviour shown by

a) Linear system   b) Nonlinear system

c) Signal flow graph   d) Block diagram

Q.6 In a closed loop control system

a) Feed back is absent   b) System will be in accurate

c) Fedback is present   d) None of these

Q.7 MATLAB is known as

a) Matrix Laboratory   b) Mathematics

c) Material Science   d) None of these

Q.8 Artificial Intelligence may include

a) Gaming   b) Robotics

c) Software development d) All of the above

Q.9 Which part of Robot provides movement to the manipulator

a) Sensor   b) Controller

c) Actuator   d) Display device

Q.10 Control system can be used in

a) Robotics   b) Process plants

c) Food processing plantsd) All of these

Section-B

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

Q.11 What is dead zone?

Q.12 Give one application of Feedforward control.

Q.13 Expand PLC.

Q.14 What is degree of freedom?

Q.15 Expand SCADA.

Q.16 Define feedback.

Q.17 Expand ANN.

Q.18 Give one application of Robotics.

Q.19 Write any two multi-loop control system.

Q.20 Name any one Computational software used in control system.

Section-C

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

Q.21 Explain Ratio Control with applications.

Q.22 Give at least five differences between feedback and feedforward control.

Q.23 Write Five application of Multiloop control system.

Q.24 Write a short note on single loop control system.

Q25 Write the advantage and disadvantage of feedback control system.

Q.26 What do you mean by hysteresis?

Q.27 Explain briefly various types of non linearities in control.

Q.28 What do you mean by saturation?