JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST-1
Ph.D. Scholar, ECE

COURSE NAME: ADVANCED CONTROL SYSTEMS   MAX. MARKS: 15
COURSE CODE: 10M1WEC132   MAX. TIME: 1 Hr

Note: Using of mobile phone in examination shall be treated as a case of unfair means.

Q-1:The following expression denotes the time response of a servomechanism.

$$C(t) = 1 + 0.2\, e^{-60t} - 1.2\, e^{-10t}$$

(i) Obtain the expression for the closed loop transfer function of the system.

(ii) Deermine the undanped frequency and damping ratio.

Assume unit step response.   [5]

Q-2: A single loop unity feedback control system has $G(s) = \dfrac{K}{s(s+2)}$. Sketch the root locus of the system characteristic equation. Hence discuss the system performance.   [5]

Q-3:Give the conceptual model of Networked Control Systems(NCS). Describe the advantages and applications of control over the network.   [5]