Dr. Rajiv Kumar

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST-1
B.Tech. ECE, 8th Semester

COURSE NAME: Networked Emb. Control Systems   MAX. MARKS: 15
COURSE CODE: 18B1WEC831   MAX. TIME: 1 Hr

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

Q-1:Explain with giving block diagram following types of Networked Control Systems(NCS):

   (A)   Shared-network connection

   (B)   Data transfer of heirerchical structure

   (C)   Data transfer of direct structure

                                     CO-2 [3×1.5=4.5]

Q-2: Explain basic functions of following Networked Control Systems(NCS) components:

    (A) Information acquisition (sensors) and command (controller)

    (B) Communication and control (actuator)
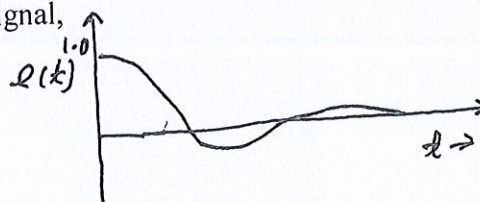
                                  CO-2   [2×2=4]

Q-3:Explain with giving example the anticipary charater in derivative control.   CO-1 [1.5]

Q-4: What do you mean by the modeling of system? Explain these two types of model:
   (A) Physical model
   (B) Mathematical model   CO-1 [1+1.5=2.5]

Q-5: You are given following error signal,

Corresponding to this error signal, draw the tentative control action if we use following controllers:
    Proportional, Inegral and Derivative

                                CO-1 [2.5]