(i) Printed Pages : 3 Roll No. .....

(ii) Questions : 9 Sub. Code : 8 6 8 6

Exam. Code : 1 2 1 9

PGDCA 1st Semester

(1129)

DATA COMMUNICATIONS AND NETWORKS

Paper—PGD-1104

Time Allowed : Three Hours] **[Maximum Marks : 60**

Note :— (i) The Question paper will consist of four units.

(ii) The students are required to attempt **one** question from each Unit and the compulsory question.

(iii) All questions carry equal marks unless specified.

UNIT—I

1. (a) Explain how 4 layers of TCP/IP model are different from 7 layers of OSI reference model ? 6

(b) Explain Bad Timing and Bad Technology in reference to OSI Model. 6

2. (a) Explain the following topologies with the help of example :

(1) Star Topology

(2) Tree Topology

(3) Ring Topology

(4) Hybrid Topology. 6

(b) Differentiate connection oriented and connectionless services. 6

UNIT—II

3. (a) Is this true "Efficiency can be achieved by multiplexing" ? If yes comment upon it and if no state why ? 6

   (b) Differentiate the three categories of multiplexing. 6

4. (a) Explain unguided media under wireless communication with applications. 6

   (b) Differentiate Analog and Digital signals. Explain Analog and Digital Communication. 6

UNIT—III

5. (a) Explain one bit sliding window protocol. 6

   (b) Describe protocol "Using Go Back N" in context to Data Link Layer. 6

6. (a) Differentiate selective repeat protocol and High level data link Protocol. 6

   (b) With the help of example explain error correcting codes and error detecting codes. 6

UNIT—IV

7. (a) Write down general principles of congestion control. 6

   (b) Explain the role of leaky bucket algorithm in traffic shaping in network layer. 6

8. (a) Explain Token Bucket Algorithm. 4

   (b) Elaborate on Internetworking. 4

   (c) Explain tunnelling with the help of example. 4

(Compulsory Question)

9. Define the following :—

(1) Gateways

(2) Switches

(3) Band Width Limitation

(4) Pipelining in Data Link Layer

(5) Flooding in network layer

(6) Distance vector in network layer. 2×6=12