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RN-8218

B. E. - II (Sem. IV) (IT) Examination

May / June – 2010

Data Communication & Networking

Time : **3** Hours] [Total Marks : **100**

Instruction :

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **B. E. 2 (Sem. 4) (IT)**

Name of the Subject :

☛ **Data Communication & Networking**

☛ Subject Code No. : **8 2 1 8** ☛ Section No. (1, 2,.....) : **1&2**

Seat No. :

Student's Signature

SECTION – I

1 Answer following questions : **10**

(a) Fill in the blanks :

(1) Communication between a computer and a keyboard involves _____ transmission.

(2) Node to Node delivery of the data unit is the responsibility of the _____ layer.

(3) To connect eight devices in ring topology, we need _____ cable links.

(4) EIA stands for _____.

(5) Framing is the functionality of _____ layer.

(6) The most common UTP connector is _____.

(7) DSL stands for _____.

(8) Collision domain value for Ethernet is _____.

(9) Transmission media lie below the _____ layer.

(10) Error detection method used by the higher-layer protocols is called _____.

(b) Explain IEEE standard 802.5 : Token ring. **10**

2 (a) Discuss various categories for twisted pair cables. **8**

(b) Write short note on : Microwaves. **7**

OR

2 (a) Explain carrier sense multiple access protocols. 7

(b) Discuss Hamming code. 8

3 (a) Explain FDDI. 7

(b) Write short note on : Standards organizations. 8

OR

3 (a) Explain token bus control frames. 8

(b) Draw and explain various components of data communication system. 7

SECTION – II

4 (a) Do as directed : 10

(1) A sine wave completes 1000 cycles in one second. What is its period ?

(2) Distance vector routing is _____ type of routing algorithm.

(a) Adaptive (b) Non-adaptive.

(3) TTL stands for _____.

(4) What are the three major multiplexing techniques ?

(5) In _____ transmission, bits are transmitted simultaneously, each across its own wire.

(6) Translation and compression is handled by _____ layer.

(7) Give full form of DTE.

(8) List type of polar encoding.

(9) List any one compression tool used by the end user.

(10) A repeater takes a weakened or corrupted signal and _____ it.

(b) (1) Explain Router. 2

(2) Explain the duties of session layer. 5

(3) Explain NRZ-L and NRZ-I encoding techniques. 3

5 (a) Explain synchronous time division multiplexing with an example. 8

OR

(a) Compare distance vector routing algorithm with link state routing algorithm. 8

(b) Explain the duties of transport layer with appropriate example. 7

6 Attempt any **three** : **15**

(1) Explain cable modem.

(2) Explain frequency division multiplexing.

(3) What is a bridge ? Discuss different types of bridges.

(4) Discuss count to infinity problem.
