

00801

ADIT/BIT PROGRAMME

Term-End Examination

December, 2011

CST-202 : DATA COMMUNICATION AND COMPUTER NETWORKING

Time : 3 hours

Maximum Marks : 75

Note : All questions from section A are **Compulsory**. Answer **any three** from section B. All questions (1 to 10) carry **one mark each**.

SECTION - A

Select the best alternative (Q. 1 to 5)

1. Which transmission is having highest efficiency ?
(a) Simplex (b) Half Duplex
(c) Full Duplex (d) Automatic
2. Digitalization refers to _____.
(a) Sampling only
(b) Either Sampling or quantization
(c) Quantization only
(d) Both sampling and quantization
3. Sliding window protocol is a _____ control protocol.
(a) Service (b) Flow
(c) Logic (d) Error

4. X.25 normally assumes the use of _____ as the physical level standard.
- (a) X.21 (b) ISDN
(c) IEEE 802.1 (d) FDDI
5. Which one of the following is a balanced interface ?
- (a) RS - 232 C (b) RS - 423
(c) RS - 449 (d) RS - 422

State *True/False* for (Q. 6 to 10) :

6. Eaves dropping is not possible in coaxial cables.
7. If central node in star topology fails, whole network fails.
8. Media access control in FDDI is based on packet passing.
9. The preamble field of the IEEE 802.3 frame contains 12 bits.
10. IEEE 802.4 standard defines a DQDB network.

11. (a) Write *any three* differences between each of the following : 3x5=15
- (i) ASK and PSK
 - (ii) DQDB and X.25
 - (iii) Fibre optics and UTP
 - (iv) Token Ring and Token Bus
 - (v) Internet and Intranet
- (b) List the address range of different classes of IP addresses (Class A to Class D). Also, explain the importance of subnet masking. 5

SECTION - B

Answer *any three* questions from the following :

12. (a) What is the need of multiplexing in data communication ? Differentiate between upward and downward multiplexing. 6
- (b) What is the motivation for Sub-Layers in Data link layer ? Explain the contention based and polling based Media Access Protocols. 9
13. (a) Draw the header of TCP. Explain the purpose and use of each field in the protocol. 9
- (b) Compare and contrast LAN, MAN and WAN. Also, give an example of each. 6
14. (a) What is microwave transmission ? Write two advantages and disadvantages each of the microwave system. 5
- (b) What is MODEM ? List at least four functions of MODEM. 5
- (c) What is the size of ATM cell ? Explain the different ATM layers with their significance. 5
15. Write short note on the following : 5x3=15
- (a) Domain Name System
- (b) FDDI
- (c) RPC Mechanism
-