AQ – 2775

First Semester M. E. (I.T.) Full Time Examination

NET CENTRIC COMPUTING

Paper – 1 NMEF 3

P. Pages : 3

Time : Three Hours]

[Max. Marks : 80

Note : (1) All questions carry equal marks.
(2) Due credit will be given to neatness and adequate dimensions.
(3) Assume suitable data wherever necessary.
(4) Illustrate your answer wherever necessary with the help of neat sketches.
(5) Use pen of Blue/Black ink/refill only for writing the answer book.

1. (a) Explain the differences between error correction and error detection. Give an example of a network that requires autono-mous error correction.   8

   (b) Explain following terms.

   (1) Network Addressing.

   (2) Routing.

   (3) Reliability.   6

OR

2. (a) How computer network addressing is important ?   6

   (b) Define computer network. Also explain different types of categories.   8

3. (a) Explain fibre optic media. Also give the general classification.   7

   (b) Compare and contrast :—

   (1) Single mode and multimode fibre optic cable.

   (2) I persistent and Non-persistent CSMA..   6

AQ–2775

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OR

4. (a) Explain how flow control is important in computer networking. 6

   (b) Consider a polynomial for generating CRC $x^4 + x^3 + x + 1$. Compute the bit steam that is to be transmitted if a message 11100101 is sent. How does the receiver check whether the message was transmitted without any error ? 7

5. (a) Briefly summarize and compare the various VPN strategies. 7

   (b) What do you understand by subnet masking ? 6

OR

6. (a) What is RIP ? Explain with different strategies. 6

   (b) Explain distance vector routing algorithm by giving example. 7

7. (a) Explain difference between Manchester and differential Manchester encoding scheme. 8

   (b) Explain the following second generation token frame :—

   (1) Switched token ring.

   (2) Full duplex token ring. 6

OR

8. (a) Explain the contents of IEEE 802.5 frame. 8

   (b) Compare and contrast :—

   (1) Active monitor and standby monitor.

   (2) Gigabit Ethernet and ATM. 6

9. (a) Explain FDDI giving token format and frame format. 7

   (b) Compare the frame relay frame to the content of IPv4 frame. Which is more efficient protocol, frame relay or IPv4 ? Why ? 6

AQ-2775   2

OR

10. (a) Describe the primary differences between I SDN BRI and PRI services. 7

    (b) Compare and contrast PVC and SVC. 6

11. (a) Explain in detail DSL service. 7

    (b) What is the difference between virtual path connection(VPC) and virtual channel connection (VCC) ? 6

OR

12. (a) Explain in brief SMDS interface protocol. 7

    (b) What is ATM ? Explain general concepts and operations. 6

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