D 14802   (Pages : 3)   Name..

Reg. No....................................

THIRD SEMESTER B.VOC. DEGREE EXAMINATION, NOVEMBER 2016

Software Development

SDC 3IT 09—BASIC NETWORKING CONCEPTS

Time : Three Hours   Maximum : 80 Marks

Section A (Very Short Answer Type)

Answer **all** *questions.*
Each question carries 1 mark.

1. In mesh topology the total number of links to connect n nodes is————.

2. Unguided media are suitable for ————topology.

3. In polling technique, if there is no data, usually a ———— message is sent back.

4. A single parity check code can detect number of errors.

5. A bridge operates both in ———— and ———— layer.

6. In stop and wait ARQ, if data 1 has an error, the receiver sends a frame.

     (a) NAK 0.   (b) NAK 1.

     (c) NAK 2.   (d) NAK

7. ———— is a new transport layer protocol designed for multimedia.

     (a) UDP.   (b) TCP.

     (c) SCTP.   (d) None.

8. Open loop congestion control ———— congestion.

     (a) Prevents.   (b) Increases.

     (c) Removes.   (d) None.

9. Public key encryption involves the use of :

     (a) One key.   (b) Two keys.

     (c) Hash functions.   (d) All of the above.

10. Digital signature can provide ———— for a network.

     (a) Authentication.   (b) Integrity.

     (c) Non repudiation.   (d) All of the above.

(10 × 1 = 10 marks)

Turn over

Section B (Short Answer Type)

Answer any **eight** *questions.*
Each question carries 2 marks.

11. Explain digital and analog data.

12. List the coaxial cable connectors.

13. Discuss concept of redundancy in error detection.

14. Differentiate odd parity and even parity.

15. Compare physical and logical address.

16. What is meant by source quench ?

17. What are the basic components of a router ?

18. Why a connection establishment in TCP is called three-way handshaking ?

19. What is congestion control ?

20. What is remote login ?

21. List network security goals.

22. Explain streaming live audio/video.

$(8 \times 2 = 16 \text{ marks})$

Section C (Short Essays)

Answer any **six** *questions.*
Each question carries 4 marks.

23. Differentiate datagram network and virtual circuit network.

24. Differentiate analog and digital transmission.

25. Briefly explain the frame format of Ethernet.

26. Explain ALOHA and its types.

27. Explain distance vector routing.

28. List the important features of IPV6

29. Explain DNS query operation.

30. Compare hash function and digital signature.

31. What do you meant by JPEG ?

$(6 \times 4 = 24 \text{ marks})$

Section D (Long Essays)

Answer any **two** *questions.*
Each question carries 15 *marks.*

32. Compare different multiplexing methods.

33. Explain how Link state algorithm is useful in Open Shortest Path First.

34. What is the need of protocols ? Explain the major internet protocols.

35. Explain the significance of firewall ? Explain the categories of firewall.

(2 × 15 = 30 marks)