PD-175-S.E.-CV-19

M.Sc. COMPUTER SCIENCE (1st Semester)

Examination, Dec.-2020

ADVANCE COMPUTER NETWORK

Time : Three Hours] **[Maximum Marks : 80**

[Minimum Pass Marks : 29

Note : Answer from both the Sections as directed. The figures in the right-hand margin indicate marks.

Section-A

1. **Answer the following questions:-** 1x10=10

(a) **The end-to-end delivery of entire message is the responsibility of the.....layer.**

(i) Presentation (ii) Network (iii) Transport (iv) Session

(b) **Which topology features a point-to-point line configuration?**

(i) Mesh (ii) Ring (iii) Star (iv) All of the above

(c) **A signal has a bandwidth of 30 Hz the highest frequency is 70 Hz. What is the lowest frequency?**

(i) 30 Hz (ii) 70 Hz (iii) 40 Hz (iv) 100 Hz

(d) **Radio communication frequencies range from.....**

(i) 3 KHz to 300 KHz (ii) 300 KHz to 3 GHz (iii) 3 KHz to 300 GHz (iv) 3 KHz to 3000 GHz

(e) **In stop and wait ARQ, if data 1 has an error, the receiver sends a.....frame.**

(i) NAK 0 (ii) NAK 1 (iii) NAK 2 (iv) NAK

(f) **The retransmission of damaged or lost frames in the data link layer is known as.....**

(i) Error control (ii) Flow control (iii) Line disciplme (iv) Error conditioning

(g) **A.....can transform non-SMTP mail to SMTP format and vice versa.**

(i) Mail spool (ii) Mail exchanger (iii) Mail gateway (iv) Mail file

(h) **The.....translates local characters into NVT forms.**

(i) TELNET client (ii) TELNET server (iii) Terminal driver (iv) Pseudoterminal driver

(i) **In digital signature, the private key is used for.....and the public key for.....**

(i) Encryption , Decryption (ii) Decryption , Encryption

(iii) Plaintext , Cipher text (iv) Cipher text , Plaintext

(j) **.....is a collection of protocols designed by the IETF to provide security for a packet at the network level.**

(i) IPSec (ii) SSL (iii) PGP (iv) None of the above

2. **Answer the following questions:-** 2x5=10

(a) **What is Data communication? Explain its component.**

(b) **What do you mean by guided media? Explain any one guided media.**

(c) **What is HDLC? Explain HDLC configuration.**

(d) **What is Firewalls?**

(e) **Explain IP security in Brief.**

Section-B 12x5=60

Answer all questions.

UNIT-I

3. **Define Topology. What are the different categories of Topology? Write the advantage and disadvantage of each type.**

OR

Explain OSI reference model along with functions of every layer.

UNIT-II

4. **Write a brief note on Transmission impairment.**

OR

Write brief notes on following:-
(a) Multiplexing (b) Packet Switiching

UNIT-III

5. Write a brief note on shading window protocol. Why the size of window is one less than the modulo range in this protocol?

OR

Explain ISDN in following points:-
(a) Categories of service provided by ISDN (b) Channel types (c) Broadband ISDN

UNIT-IV

6. Explain TCP protocol in details. How TCP is different from UDP protocol? Write the differences.

OR

Explain the following:-
(a) HTTP Protocol (b) IP Address

UNIT-V

7. What is mobile Adhoc Network? Explain its architecture list out the properties of a MANET.

OR

Explain the following:-
(a) Digital Signature (b) Cryptography