19ITU31

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022
(Fifth Semester)

Branch – **INFORMATION TECHNOLOGY**

COMPUTER NETWORKS

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 x 1 = 10)

1 The network layer concerns with ----------
(i) bits (ii) frames (iii) packets (iv) byte

2 The physical layer concerns with----------
(i) bit-by-bit delivery (ii) process to process delivery
(iii) application to application delivery (iv) byte-byte delivery

3 The distance between two consecutive maxima (or minima) is called the-----
(i) wave length (ii) frequency
(iii) sample (iv) none

4 The data link layer on the receiving end removes the escape bytes before giving the data to the network layer. This technique is called ----------
(i) flag byte (ii) bit stuffing
(iii) byte stuffing (iv) frame stuffing

5 ----------is a techniques, in which every incoming packet is sent out on every outgoing line except the one it arrived on.
(i) broad cast (ii) shortest path
(iii) flooding (iv) hierarchical

6 The data link layer takes the packets it gets from the network layer and encapsulates them into ----------for transmission
(i) packet (ii) frames (iii) bytes (iv) bit

7 The ----------entity carries out CONNECT primitive by blocking the caller and sending a packet to the server.
(i) transport (ii) network (iii) physical (iv) data link

8 UDP transmits segments consisting of an _____header followed by the payload.
(i) 8-byte (ii) 16-byte (iii) 32-byte (iv) 64-byte

9 How many bits keys used by PGP encrypts data by using a block cipher?
(i) 128-bit keys (ii) 8-bit keys. (iii)256-bit keys. (iv)32-bit keys

10 DNS records are grouped into sets called
(i) Resource Record Sets (ii) Resource Retrieve Sets
(iii) Resource Record Second (iv) Record Resource Sets

Cont...

SECTION - B (25 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 5 = 25)

11 a Explain MAN.

OR

b Explain the Service Primitives in Network Software.

12 a Explain in detailed about Error Control.

OR

b Bring out Services provided by the Data Link Layer to the Network Layer.

13 a Compare the difference between Virtual-Circuit and Datagram Networks.

OR

b How to Store-and-Forward Packet Switching?

14 a Summarise the terms of Real-Time Transport Protocols.

OR

b State and explain the TCP Service Model.

15 a Outline the Message Formats in Email.

OR

b Illustrate the terms of Secured Socket Layer.

SECTION -C (40 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 8 = 40)

16 a Discuss about OSI Reference Model.

OR

b Summarize the terms of Geostationary Satellites.

17 a Analyze about Error-Detecting Codes give an example.

OR

b Discuss the following i) One-Bit Sliding Window Protocol
ii) A Utopian Simplex Protocol

18 a Point out any two Network Layer Design Issues.

OR

b Examine the following i) Shortest Path Routing Algorithm.
ii) Flooding Algorithm
iii) Broad Cast Algorithm

19 a Illustrate the Transport layer services Primitives.

OR

b Discuss about Internet Transport Protocol UDP.

20 a Elucidate the concept of DNS.

OR

b Highlight about Web Security in Network.

Z-Z-Z END