

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2024
(Fifth Semester)

Branch – **COMPUTER TECHNOLOGY**

DATA COMMUNICATION AND NETWORKS

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (5 x 1 = 5)

- 1 Which of the following layer isn't present in the TCP/IP model but is included in the OSI model?
 (i) Network layer (ii) Session layer
 (iii) Application layer (iv) Transport layer
- 2 Which cable consists of two insulated copper wires twisted together?
 (i) coaxial (ii) fiber-optic
 (iii) twisted-pair (iv) none of the above
- 3 Choose, which framing need a delimiter (flag) to define the boundary of two frames?
 (i) fixed-size (ii) variable-size
 (iii) standard (iv) none of the above
- 4 Choose among the following, which is the most common internet protocol?
 (i) PPP (ii) FTP
 (iii) TCP/IP (iv) SMTP
- 5 Choose from the following, who keeps the private key in asymmetric key cryptography?
 (i) Sender (ii) Receiver
 (iii) Both sender and receiver (iv) None

SECTION - B (15 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

- 6 a Define the types of Networks.
 OR
 b State the Transmission modes.
- 7 a Define WDM.
 OR
 b What is Virtual circuit networks? Describe.
- 8 a Describe Framing.
 OR
 b Explain: Ethernet Standard.
- 9 a Narrate IPv4 and IPv6 addresses.
 OR
 b Define internetworking.

Cont...

10 a Sketch process to process delivery.

OR

b Analyze DNS.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11 a State the Layers of OSI Model.

OR

b Define Analog and Digital Signals in Physical layer.

12 a Discuss about TDM.

OR

b Label the types of Guided Media.

13 a Describe Checksum with an example.

OR

b Explain Data link control protocols.

14 a Narrate - IPv4 addresses.

OR

b Explain - Multicast routing.

15 a Explain E-mail protocols.

OR

b Narrate Asymmetric key Cryptography.

Z-Z-Z

END