

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2023  
(Fifth Semester)

Branch – COMPUTER SCIENCE

COMPUTER NETWORKS

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. What does a set of rules define?  
i) protocol                      ii) SMTP                      iii) FTP                      iv) IMAP
2. Communication between a computer and a keyboard involves \_\_\_\_\_ transmission.  
i) Automatic                      ii) Half-duplex  
iii) Simplex                      iv) Full duplex
3. Data link layer takes packet from \_\_\_\_\_ and encapsulates them into frames for transmission.  
i) Network layer                      ii) Physical layer  
iii) Transport layer                      iv) Application layer
4. A \_\_\_\_\_ is a hardware device which is used to receive, analyse and forward the incoming packets to another network.  
i) Router                      ii) Modem  
iii) Repeater                      iv) USB
5. What is the length of the IPv4 address?  
i) 8 bits                      ii) 16 bits                      iii) 32 bits                      iv) 128 bits

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a Explain the uses of networks.  
OR  
b Give the difference between connection oriented and connectionless services.
7. a Illustrate the frequency division multiplexing.  
OR  
b Elucidate the concept of code division multiplexing.
8. a Write a note on error correcting codes.  
OR  
b Describe the simplex stop and wait protocol for an error free channel.
9. a Compare virtual circuit with Datagram Network.  
OR  
b Illustrate the Implementation of connectionless service.
10. a Discuss the Transport layer services.  
OR  
b Give difference between error control and flow control.

Cont...

**SECTION -C (30 Marks)**

Answer **ALL** questions  
**ALL** questions carry **EQUAL** Marks (5 x 6 = 30)

11. a Illustrate the OSI Reference Model.  
OR  
b Explain the concept of LAN.
12. a Write notes on guided transmission media.  
OR  
b Discuss about the Radio Transmission.
13. a Describe the one bit sliding window protocol.  
OR  
b Narrate the concept of Asymmetric Digital Subscriber Loop.
14. a Analyze the Implementation of connection oriented service  
OR  
b Explain the concept of Flooding.
15. a Describe the Congestion Control.  
OR  
b Construct the Domain Name System.

Z-Z-Z

END