

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022  
(Sixth Semester)

Branch – INFORMATION TECHNOLOGY

DISCIPLINE SPECIFIC ELECTIVE – II : TCP/IP

Time: Three Hours

Maximum: 75 Marks

**SECTION-A (10 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

1. What layer in the TCP/IP stack is equivalent to the transport layer of the OSI model?  
(i) Application (ii) Host-to-Host  
(iii) Network Access (iv) Internet
2. Which of the following cabling techniques is considered best between buildings for establishing LANs?  
(i) 10 Base5 (ii) 10 Base2  
(iii) 10 Base-F (iv) 10 Base
3. Label an IP packet is called a \_\_\_\_\_.  
(i) User datagram (ii) Segment  
(iii) Fragment (iv) Datagram
4. Define a IPv4 Addresses, classful addressing is replaced with \_\_\_\_\_.  
(i) Classful Addressing (ii) Classful Advertising  
(iii) Classless Advertising (iv) Classless Addressing
5. Which of the following protocols uses both TCP and UDP?  
(i) DNS (ii) FTP  
(iii) SMTP (iv) Telnet
6. Which two protocols are used in the transport layer of the TCP/IP model?  
(i) UDP and HTTP (ii) HTTP and TCP  
(iii) TCP and UDP (iv) ICMP and HTTP
7. What type of FTP is built on \_\_\_\_\_ architecture?  
(i) Client-server (ii) P2P  
(iii) Service oriented (iv) Data centric
8. Telnet operations are sent as \_\_\_\_\_.  
(i) 4 bits (ii) 8 bits  
(iii) 16 bits (iv) 32 bits
9. State the header length of an IPv6 datagram is \_\_\_\_\_.  
(i) 10bytes (ii) 25bytes  
(iii) 30bytes (iv) 40bytes
10. Mention the Internet Protocol Version (IPv6) has a larger address space of \_\_\_\_\_.  
(i) 2x16 (ii) 2x32  
(iii) 2x8 (iv) 2x128

Cont...

**SECTION - B (25 Marks)**

Answer ALL questions

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

- 11 a Analyze about the Switched WANs with example.  
OR  
b Explain the OSI model with neat diagram.
- 12 a Classify in detail about the two types of Delivery of IP protocols.  
OR  
b Prepare a note on Sub netting.
- 13 a Describe about the Checksum with example.  
OR  
b Summarize in detail about the Transmission Control Blocks (TCB).
- 14 a Develop and explain the Mode of Operation.  
OR  
b State a note on Network Virtual Terminal.
- 15 a Narrate about the Packet Format in detail.  
OR  
b Organize and explain about the Extension Header.

**SECTION -C (40 Marks)**

Answer ALL questions

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

- 16 a Identify and give detailed note on different Layers in TCP/IP protocol suite with a neat diagram.  
OR  
b Enumerate in brief about TCP/IP Addressing.
- 17 a Highlight in detail about the Structure of a Router.  
OR  
b Discuss the Fragmentation and its process with neat diagram.
- 18 a Categorize about the Datagram.  
OR  
b Examine in detail about the TCP Services.
- 19 a Discover the Organization of TFTP and its functions.  
OR  
b Survey about Option and examine the Option Negotiation.
- 20 a Compare between IPv4 and IPv6 Headers.  
OR  
b Elucidate function does the Flow Label field in the IPv6 header perform.

Z-Z-Z

END