



15894



LIBRARY
Brainware University
Barasat, Kolkata -700125

BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – Dip.CSE-2022/Dip.CSE-2023
Course Name – Computer Networks
Course Code - DCSE-PC405
(Semester IV)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Select the correct full form of DNS:
 - a) Data Name Server
 - b) Domain Name System
 - c) Dynamic Name Service
 - d) Digital Network System
- (ii) Select the protocol used for remote login to another computer over a network:
 - a) FTP
 - b) TELNET
 - c) HTTP
 - d) SMTP
- (iii) Select the option that is NOT an application layer protocol:
 - a) FTP
 - b) HTTP
 - c) TCP
 - d) SMTP
- (iv) Select the type of topology best suited for large businesses which must carefully control and coordinate the operation of distributed branch outlets?
 - a) Ring
 - b) Local area
 - c) Hierarchical
 - d) Star
- (v) Identify the network type that covers a city-wide area.
 - a) LAN
 - b) WAN
 - c) MAN
 - d) PAN
- (vi) Select the term HTTP stands for.
 - a) Hyper terminal tracing program
 - b) Hypertext tracing protocol
 - c) Hypertext transfer protocol
 - d) Hypertext transfer program
- (vii) Indicate the software that prevents the external access to a system?
 - a) Firewall
 - b) Gateway
 - c) Router
 - d) Virus checker
- (viii) Select the maximum length (in bytes) of an IPv4 datagram is?
 - a) 32
 - b) 1024
 - c) 65535
 - d) 512

- (ix) Select the main advantage of a mesh topology.
- a) Easy to set up
 - b) Cost-effective
 - c) High reliability and fault tolerance
 - d) Uses fewer cables
- (x) Select the device used to connect multiple LANs
- a) Hub
 - b) Switch
 - c) Router
 - d) Modem
- (xi) Identify the function of the data link layer
- a) Logical addressing
 - b) Error detection and correction
 - c) End-to-end communication
 - d) Data encryption
- (xii) Select the type of communication where sender and receiver transmit data simultaneously.
- a) Simplex
 - b) Half-duplex
 - c) Full-duplex
 - d) Multiplex
- (xiii) Identify the purpose of a MAC address
- a) Identifies devices on a network
 - b) Translates IP addresses
 - c) Encrypts data packets
 - d) Defines routing paths
- (xiv) Select the network device that operates at the Data Link Layer of the OSI model.
- a) Router
 - b) Switch
 - c) Hub
 - d) Repeater
- (xv) Identify the network type that covers a city-wide area.
- a) LAN
 - b) WAN
 - c) MAN
 - d) PAN

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Define piggybacking and its usefulness. (3)
3. Determine the differences between Pure ALOHA and Slotted ALOHA. (3)
4. Describe Computer Network and its use. (3)
5. Distinguish between Guided and Unguided media in Data Communication. (3)
6. Differentiate between TCP and UDP. (3)

OR

Differentiate between connection oriented and connection-less protocol. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Illustrate the various classes in classful addressing. (5)
8. Identify the manner that transport layer uses to handle segmentation and reassembly of data packets during transmission. (5)
9. Explain vividly the concepts of Go back- ARQ and Selective Repeat ARQ (5)
10. For 'n' devices in a network, evaluate the number of cable links required for a mesh, ring, bus and star topology. (5)
11. Differentiate between parallel and serial transmission. (5)
12. Compare well known ports and ephemeral ports. (5)

OR

Explain the role of SCTP protocol. (5)
