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Question Paper Code : 90434

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.

Fifth Semester

Artificial Intelligence and Data Science

CW 8691 — COMPUTER NETWORKS

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is a network?
2. Define links in network.
3. What is HDLC?
4. Define PPP in Computer Networking?
5. What is the use of routing?
6. What is called Packet Switching?
7. Which layers in network architecture form Network support layer and uses support layer?
8. What is a flow control and its function in Network management?
9. Define FTP?
10. What is the use of DNS?

PART B — (5 × 13 = 65 marks)

11. (a) Elucidate Internet Architecture with a neat diagram. Elaborate the layers with its functionalities.

Or

- (b) Elucidate the functions performed by the Physical Layer and layer of the OSI-ISO Network architecture.

12. (a) Illustrate the responsibilities of the Data Link Layer. Where are Data Link Protocols used and list their functions?

Or

- (b) Illustrate in detail the different types of communication modes and the framers in HDLC?

13. (a) Explain multicast routing. When hierarchical routing is used? What do you mean by Interior Gateway Protocol?

Or

- (b) Explain briefly how IPV6 is preferred than IPV4. Why we migrate from IPV4 to IPV6?

14. (a) Illustrate the following Transport Layer functionalities: Process to process Delivery, End-to-End Connection Between Hosts, Multiplexing and Demultiplexing, Congestion Control, Flow Control.

Or

- (b) Describe the following retransmission, simplex, half duplex and full duplex transmission.

15. (a) Illustrate the needs of the Network Application Layer as the first layer of TCP/IP OSI-ISO Network Reference Model?

Or

- (b) Illustrate the main functions of DNS Server? Explain how does DNS and DNS Server works?

PART C — (1 × 15 = 15 marks)

16. (a) TCP Connection Establishment and Termination with a neat diagram. Explain the communication process using an example.

Or

- (b) Illustrate briefly the characteristic of UDP and list out the UDP attributes that are suitable for a specific applications?