Reg. No. :

Question Paper Code: 45802

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

Fifth Semester

Information Technology

14UIT502 - COMPUTER NETWORKS

(Common to Computer Science and Engineering)

(Regulation 2014)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The portion of physical layer that interfaces with the media access control sub layer is called

    (a) physical signaling sub layer   (b) physical data sub layer
    (c) physical address sub layer   (d) none of these

2. Which is the only layer of OSI layer that prevents itself from adding its own header to the data during the data transmission process?

    (a) Application layer   (b) Network layer
    (c) Physical layer   (d) None of these

3. Who is the dispatcher in the network?

    (a) Bridges   (b) Routers   (c) Hub   (d) Modems

4. FDDI stands for

    (a) Fiber device data interface   (b) Fiber distributed device interface
    (c) Fiber distributed device interchange (d) Fiber distributed data interface

5. Header of datagram in IPv4 has

    (a) 0 to 20 bytes   (b) 20 to 40 bytes   (c) 20 to 60 bytes   (d) 20 to 80 bytes

6. ICMP is primarily used for

    (a) error and diagnostic functions   (b) addressing
    (c) forwarding   (d) none of these

7. The port number which is used for Remote procedure call in UDP is

    (a) 123   (b) 111   (c) 161   (d) 25

8. The port number which is used for SMTP in TCP is

    (a) 123   (b) 111   (c) 161   (d) 25

9. Find out the order of the elements in the URL

    (a) Method, Port, Host, Path   (b) Port, Method, Host,Path
    (c) Host, Method, Port, Path   (d) Method, Host, Port, Path

10. Which one of the following is not an application layer protocol?

    (a) media gateway protocol   (b) dynamic host configuration protocol
    (c) resource reservation protocol   (d) session initiation protocol

<div align="center">PART - B (5 x 2 = 10 Marks)</div>

11. What Recall the Error correction and classify the error correction methods?

12. State the responsibilities of data link layer.

13. List out features in OSPF.

14. What are the advantages of Dynamic Host Configuration Protocol?

15. How does MIME enhance SMTP?

<div align="center">PART - C (5 x 16 = 80 Marks)</div>

16. (a) Draw and explain the different layers of OSI architecture.   (16)

<div align="center">Or</div>

    (b) Explain about the error correction and detection in networks with example.   (16)

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17. (a) Explain the physical properties of Ethernet 802.3 with necessary diagram of Ethernet transceiver and adaptor. (16)

Or

(b) Identify the issues in Ethernet and recall the concepts involved in it. (16)

18. (a) (i) With example explain IP multicasting. (8)

(ii) How can you avoid congestion in the network transmission? Explain it. (8)

Or

(b) Give a brief note on routing and explain distance vector routing and link state routing. (16)

19. (a) Explain in detail about TCP with neat sketch. (16)

Or

(b) (i) Discuss about adaptive retransmission. (8)

(ii) Explain various methods used to improve QOS in network transmission. (8)

20. (a) Discuss the role of a DNS on a computer network. (16)

Or

(b) Elaborate about the RSA algorithm and give an one example. (16)

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