Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University), Coimbatore - 641 043

Master's Degree Examination – November 2018
Semester – I

Class: I PG
Major: M.Sc. Computer Science

Time: 3 hours
Max. marks: 60

17MCSC04 Data Communication and Networks

Part-A
Choose the Correct Answer **10X1/2=5**

1. Which of the following allow multiple users or devices to share one communication line?

   a) Multiplexer b) Concentrator c) Controller d) Duplexer

2. In ---------- I resources are allocated on demand
   a) circuit switching b) datagram switching
   c) frame switching d) packet switching

3. 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) Physical Dynamic Sub Layer

4. Physical layer provides--------

   (a) mechanical Specifications of Electrical Connectors and cables
   (b) electrical Specification of Transmission line signal level
   (c) specification for IR over optical Fiber
   (d) all of the above

5. What is called the message created at the Data-Link layer?
   (a) A frame (b) An IP packet (c) A TCP segment (d) A datagram

6. During Encapsulation/ Deencapsulation, at which layer of the hybrid TCP/IP-OSI model a trailer is usually added to the message?

   (a) Physical (b)Transport (c) Data Link (d). Application

7. For purposes of routing, the Internet is divided into
   a) wide area networks b) autonomous systems
   c) autonomous networks d) local area networks

8. A LAN allows several LANs to be connected
   a) wired b) wireless c) backbone d) virtual LAN

9. IGMP is a companion to the protocol
   a) UDP b) TCP c) ICM d) IP

10. -------- is a flow characteristic that application scan tolerate in different degrees
    a) Reliability b) Delay c) Jitter d) Bandwidth

Part-B 5X4=20

Answer the Following

Answer should not exceed 200 words or one page

11. (a) Explain the OSI reference model with neat diagram.

(or)

(b) Explain the tcp/ip reference model with neat diagram.

12. (a) Explain the concept of MODEM.

(or)

(b) What are the different types of networks? Explain in detail.

13. (a) Explain the protocols in Data link layer .

(or)

(b) Explain the MULTIPLE ACCESS PROTOCOLS in detail.

14.(a) Explain the concepts of Cyclic Codes.

(or)

(b) Explain the concepts of Data link Control.

15. (a) What do you mean by Wireless WANs?

(or)

(b) Explain the concept of IP Address.

Part-C 5X7=35

Answer the Following

Answer should not exceed 600 words or three pages

16. (a) Which one of the seven OSI layers is specifically related to routing and what is its purpose?

(or)

(b) What are the main disadvantages of dynamic routing?

17. (a) Detail Explanation about Switching Concept.

(or)

(b) Detail Explanation about Datagram Networks and Virtual Circuit Networks

18.(a) Explain about Check Sum and Cyclic Codes

(or)

(b) Explain about Linear Block Code.

19. (a) What are the four components of an 802.11 wireless network?

(or)

(b) What types of topologies can be used in an 802.11 wireless network?

20. (a) Explain Network Layers and its Types.

(or)

(b) Explain about Transport Layer.

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