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**Reg. No. :** .....

**Code No. : 30534 E      Sub. Code : JMCA 62/  
SMCA 62**

B.C.A. (CBCS) DEGREE EXAMINATION,  
APRIL 2020.

Sixth Semester

Computer Application – Main

**COMPUTER NETWORKS**

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — ( $10 \times 1 = 10$  marks)

Answer ALL questions.

Choose the correct answer :

1. \_\_\_\_\_ networks have single communication channel that is shared by all the machines on the network.
  - (a) Point-to-point links
  - (b) Broadcast
  - (c) Peer-to-peer
  - (d) Multicast

2. \_\_\_\_\_ covers a city. The best known example in the cable television network available in many cities.
- (a) LAN (b) VAN  
(c) WAN (d) MAN
3. Physical layer is responsible for movement of individual
- (a) Packet (b) Bits  
(c) Frame (d) Bytes
4. The physical layer translate logical communication requests from the \_\_\_\_\_ into hardware specific operations.
- (a) data link layer (b) network layer  
(c) transport layer (d) application layer
5. \_\_\_\_\_ provides a well-defined Service interface to the network layer.
- (a) Physical layer (b) Data link layer  
(c) Transport layer (d) Session layer
6. \_\_\_\_\_ connectionless service consists of having source machine send independent frames to the destination machines without having the destination machine acknowledge them.
- (a) Unacknowledged (b) Acknowledged  
(c) Signals (d) Bits

7. The set of optimal routes from all sources to a given destination form a tree rooted at the destination, such a tree is called a \_\_\_\_\_ tree.
- (a) binary                      (b) AVL  
(c) BST                        (d) Sink
8. Static algorithm is \_\_\_\_\_, in which every incoming packet is sent out on every outgoing line except the one it arrives on
- (a) Dijkstra's                  (b) Adaptive  
(c) Flooding                  (d) Non-adaptive
9. The \_\_\_\_\_ translate internet domain and host name to IP address.
- (a) Domain Name System  
(b) Routing information protocol  
(c) Network protocol  
(d) SMTP
10. Application layer protocol defines
- (a) types of messages exchanged  
(b) message format, syntax and semantics  
(c) rules for when and how process sent  
(d) all of the mentioned.

PART B — ( $5 \times 5 = 25$  marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write note on Local Area Networks.

Or

- (b) Explain the main categories of wireless networks.

12. (a) Describe the characteristics of Guided transmission media.

Or

- (b) Illustrate the features of Microwave transmission.

13. (a) What are the basic strategies for dealing with errors in computer networks.

Or

- (b) Discuss the algorithm for Unrestricted Simplex Protocol.

14. (a) What are the goals of Network layer?

Or

- (b) Describe the static routing algorithm flooding.

15. (a) Write note on symmetric-key signatures.

Or

- (b) Summarize the principles of RSA method.

PART C — ( $5 \times 8 = 40$  marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss about OSI Reference Model.

Or

- (b) Narrate the critique of the TCP/IP Reference Model.

17. (a) Explain about Communication Satellites.

Or

- (b) Mention the features of Fiber Optic Networks. Compare Fiber Optics with Copper Wires.

18. (a) Write note on simplex stop-and-wait protocol.

Or

- (b) Describe the basic idea of an Pure ALOHA and Slotted ALOHA.

19. (a) Illustrate the general principles of congestion control.

Or

- (b) Discuss about TCP.

20. (a) Write note on EMAIL.

Or

- (b) Explain the importance of Cryptography.
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