Reg. No.															

B.Tech. DEGREE EXAMINATION, MAY 2019
1st to 7th Semester

15CS336E – NETWORK ROUTING ALGORITHMS
(For the candidates admitted during the academic year 2015 - 2016 to 2017 - 2018)

Note:
(i) **Part - A** should be answered in OMR sheet within first 45 minutes and OMR sheet should be handed over to hall invigilator at the end of 45th minute.
(ii) **Part - B** and **Part - C** should be answered in answer booklet.

Time: Three Hours Max. Marks: 100

PART – A (20 × 1 = 20 Marks)
Answer **ALL** Questions

1. The maximum size of a packet in the Ethernet is
   (A) 1800 bytes (B) 1500 bytes
   (C) 1200 bytes (D) 1600 bytes

2. The finite amount of space maintained by the router is known as
   (A) Cache (B) Packet
   (C) Buffer (D) Memory

3. The unreliable transport layer protocol is
   (A) UDP (B) SMTP
   (C) TCP (D) POP3

4. The alternate form of addressing followed by the transport layer is
   (A) Socket number (B) Port number
   (C) IP address (D) Net id

5. Net id is also known as
   (A) Prefix (B) Subnet id
   (C) Mask (D) IP address

6. The key of the forwarding table is
   (A) Destination address (B) Source address
   (C) Next hop address (D) IP address

7. _____ router provides connectivity at a very low cost to a large number of end systems.
   (A) Edge router (B) Core router
   (C) Enterprise router (D) Access router

8. The search method used by the Naik algorithm is
   (A) Linear search (B) Binary search
   (C) Depth first search (D) Breadth first search

9. In _____ routing, the mask and the destination address an both 0.0.0.0 is routing table.
   (A) Next hop (B) Host specific
   (C) Network specific (D) Default

10. The internet is an example of
    (A) All switched network (B) Circuit switched network
    (C) Packet switched network (D) Message switched network

11. Among the several paths, which path is selected for routing?
    (A) Widest path (B) Shortest path
    (C) Frequent path (D) Maximum bandwidth path

12. Dijkstras algorithm is also called
    (A) Best path routing algorithm (B) Best cost algorithm
    (C) Shortest path algorithm (D) Least cost algorithm

13. The enhanced interior gateway routing protocol (EIGRP) is categorized as a _____.
    (A) Distance vector routing protocols (B) Link state routing protocols
    (C) Hybrid routing protocols (D) Automatic state routing protocols

14. _____ was originally developed to provide a loop free method of exchanging routing information between autonomous systems
    (A) OSPF (B) EIGRP
    (C) BGP (D) RIP

15. In unicast routing, each router in the domain has a table that defines a _____ path tree to possible destinations.
    (A) Average (B) Longest
    (C) Shortest (D) Very longest

16. In OSPF a _____ link in a network is connected to only one router.
    (A) Point to point (B) Transient
    (C) Stub (D) Multipoint

17. An adhoc wireless network consists a set of
    (A) Nodes (B) Routers
    (C) Bridges (D) Subnet

18. A one to all communication between one source and all host on a network is classified as a _____.
    (A) Unicast (B) Multicast
    (C) Broad cast (D) Point-to-point

19. Which of the following is not the category of dynamic routing algorithm?
    (A) Distance vector protocols (B) Link state protocols
    (C) Hybrid protocols (D) Automatic start protocols

20. ____ deals with the issues of creating and maintaining routing tables?
    (A) Forwarding (B) Routing
    (C) Directing (D) None directing

PART – B (5 × 4 = 20 Marks)
Answer **ANY FIVE** Questions

21. Elaborate on IP addressing in detail.

22. Categorize the various standard committees in detail.

23. Illustrate on network topology.

24. Identify the various types of router.

25. Brief about the Bellman ford centralized algorithm.

26. Classify the various router of OSPF network.

27. Write notes on MANET'S.

PART – C (5 × 12 = 60 Marks)
Answer **ALL** Questions

28. a. Derive an IP protocol stack architecture with neat sketch.

(OR)

b. Explain about
    (i) TCP packet format
    (ii) UDP packet format

29. a. Construct and explain the shared CPU architecture in detail.

(OR)

b. Identify the elements of a router in detail.

30. a. Brief about 'Dijkstra's shortest path algorithm for centralized approach' in detail.

(OR)

b. Write short notes on the following
    (i) Dijkstra based approach
    (ii) Bellman ford based approach

31. a. Discuss about communication and message format of RIPV1.

(OR)

b. Enumerate on OSPF packet types in detail.

32. a. Analyze temporarily ordered routing algorithm in detail with example.

(OR)

b. Explain about destination sequenced distance vector routing in detail.

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