Reg. No.															

B.Tech. DEGREE EXAMINATION, JUNE 2023
Fifth to Seventh Semester

18CSE453T – NETWORK ROUTING ALGORITHMS
(For the candidates admitted during the academic year 2018-2019 to 2021-2022)

Note:
(i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.
(ii) **Part - B & Part - C** should be answered in answer booklet.

Time: 3 hours | Max. Marks: 100

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

	Marks	BL	CO	PO
1. The last address of IP addresses represent (A) Unicast address (B) Network address (C) Broadcast address (D) Multicast address	1	1	1	1
2. HTTP is an example of _____ protocol. (A) Session layer (B) Presentation layer (C) Data link layer (D) Application layer	1	2	1	2
3. Subscriber telephones in the PSTN are connected through _____ to end office. (A) Regional offices (B) Local loops (C) Repeaters (D) DSUs	1	2	1	2
4. Network protocol analyzers are used to capture packets from _____ network. (A) Live (B) Dead (C) Inactive (D) Failed	1	1	1	1
5. A _____ is a device that forwards data that is not explicitly destined to it. (A) Hub (B) Switch (C) Router (D) Bridges	1	1	2	1
6. _____ is responsible for prioritizing and regulating the outgoing traffic, depending on the desired level of service. (A) Queue manager (B) Traffic manager (C) Forwarding engine (D) Route control processor	1	2	2	2
7. The time complexity for linear search prefix matching is _____. (A) O (log N) (B) O (N) (C) O (log N^2) (D) O (2log N)	1	2	2	1
8. _____ protocol is for mapping a dynamic IP address to a permanent physical address. (A) PPP (B) RIP (C) SNMP (D) ARP	1	1	2	2

9.	In distance vector routing, the routing table for each router is _____ other routers. (A) The same as (B) Different from (C) Either same or different from (D) Neither same for different from	1	2	3	2		
10.	Dijkstra algorithm is used in _____ routing to find the shortest path tree. (A) Distance vector (B) PIM (C) Link state (D) DVMRP	1	1	3	1		
11.	DVMRP is a _____ routing protocol based on RIP. (A) Group based (B) Source based (C) Destination based (D) Core based	1	2	3	2		
12.	Routing between autonomous system is referred to as _____. (A) Inter domain routing (B) Intra domain routing (C) Hierarchical routing (D) Cluster routing	1	1	3	2		
13.	What distance vector concept keeps a RIP router from advertising router to the next HOP neighbor for those routes? (A) Poisoned reverse (B) Split horizon (C) Count to infinity (D) Hold down	1	2	4	2		
14.	IGMP is _____ protocol. (A) An error reporting (B) A group management (C) A transmission (D) A transport	1	1	4	2		
15.	OSPF is also called as _____. (A) Link state protocol (B) Error-correction protocol (C) Routing information protocol (D) Border gateway protocol	1	1	4	1		
16.	EIGRP metric is _____. (A) Bandwidth only (B) Hop count (C) Delay only (D) K-values	1	2	4	2		
17.	Which one of the following is the on demand routing protocol? (A) AODV (B) DSDV (C) WRP (D) CGSR	1	1	5	1		
18.	ZRP uses a _____ routing protocols. (A) Proactive (B) Reactive (C) Both proactive and reactive (D) Table driven	1	2	5	1		
19.	Next generation network (NGN) is a _____ technology. (A) Circuit (B) Packet (C) ATM (D) Switch	1	1	5	1		
20.	NGN architecture is based on _____ layers. (A) 2 (B) 3 (C) 4 (D) 5	1	1	5	1		

		Marks	BL	CO	PO

PART – B (5 × 4 = 20 Marks)

Answer **ANY FIVE** Questions

21.	Classify the types of routers with brief explanation.	4	4	1	1
22.	Categorize the elements of a router.	4	3	1	1
23.	Differentiate routing table and forwarding table.	4	4	2	1
24.	Compare TCP and UDP.	4	4	1	1
25.	Demonstrate the operation of BGP.	4	3	3	1
26.	Distinguish RIPV1 and RIPV2.	4	4	4	1
27.	Interpret the operation of Wireless Routing Protocol (WRP).	4	3	5	1

PART – C (5 × 12 = 60 Marks)

Answer **ALL** Questions

		Marks	BL	CO	PO
28. a.	Describe the protocol architecture stack of OSI reference model and generalize the functions in each layer.	12	3	1	1
	(OR)				
b.	Demonstrate the network management architecture with neat sketch.	12	3	1	1
29. a.	Analyze the architecture and functions of a router.	12	4	2	1
	(OR)				
b.	Interpret multi-bit tries algorithm with example.	12	3	2	1
30. a.	Evaluate Bell Man Ford algorithm and analyze.	12	4	3	1
	(OR)				
b.	Analyze distance vector routing protocol with neat sketch.	12	4	3	1
31. a.	Discuss IGRP packet format in detail.	12	2	4	1
	(OR)				
b.	Classify the OSPF design for different types of network.	12	4	4	1
32. a.	Examine any two reactive routing protocols for adhoc networks.	12	4	5	1
	(OR)				
b.i.	Determine the characteristics next generation networks.	4	4	5	1
ii.	Demonstrate NGN architecture with neat sketch.	8	3	5	1

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