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B.Tech DEGREE EXAMINATION, NOVEMBER 2023

Seventh Semester

18ECE320T - SOFTWARE DEFINED NETWORKS

(For the candidates admitted during the academic year 2020 - 2021 & 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 and Part - C should be answered in answer booklet.

Time: 3 Hours				Max. Marks: 100				
PART - A (20 × 1 = 20 Marks) Answer all Questions					со			
1.	SDN stands for(A) software defined network (C) service defined network	(B) software definition network(D) service definition network	1	1	1			
2.	 What are the 3 layers that make up SDN? (A) The network layer, 2) The physical layer, and 3) The transport layer (C) The application layer, 2) The transport layer, and 3) The network layer 	 (B) The application layer, 2) The control layer, and 3) The physical layer (D) The transport layer, 2) The network layer, and 3) The datalink layer 	1	1	1			
3.	Traditional networks requires (A) Application specific integrated circuits (C) Dedicated Hardware	(B) Fixed function network devices(D) More equipment for expansion	1	1	1			
4.	The layers in SDN communicate via (A) A Set of protocols (C) A Set of switches	(B) A Set of routers (D) A set of interfaces	1	1	1			
5.	Flows are represented on a device as a (A) Data entry (C) Switch entr	(B) Flow entry (D) Router entry	1	2	2			
6.	SDN applications are built on	f the controller (B) Bottom (D) Right side	1	2	2			
7.	is where the controller decides to currently being driven through a network decide (A) Proactive flow (C) Reactive flow	evice	1	2	2			
8.	Abbreviation of TCAMs is	(B) Ternary concept-addressable memories(D) Ternary content-addressable map	1	2	2			

9.	A unique aspect of the OpenFlow switch is (A) Packet-matching (C) Packet-separating	embodied in the function (B) Packet-Correcting (D) Packet-detecting	1	2	3	
10.	The controller has a data packet to forw OpenFlowmessage. (A) PACKET_Match (C) PACKET_IN	rard out through the switch, it uses the (B) PACKET_IN_OUT (D) PACKET_OUT	1	2	3	
11.	The defines the communication b OpenFlow switch. (A) Flow entry (C) OpenFlow protocol	(B) Flow Table (D) OpenSide protocol	1	2	3	
12.	If the end of the flow table is reached without (A) Flow table (C) Packet OUT	ut finding a match, it is called a (B) Table miss (D) Packet IN	1	2	3	
13.	Individual organizations that maintain their (A) Private single-tenant (C) Public multitenant.	own data centers belong in this category (B) Private multitenant (D) Both (a) and (b)	1	2	4	
14.	The three main business models of clou Platform as a Service (PaaS), and Software a (A) Non-Accumulating Stratum (C) Infrastructure as a Service (IaaS)	d computing are ,	1	2	4	
15.	Data centers needs more	dwidth (B) Narrow bandwidth (D) Cross-sectional	1	2	4	
16.	is the earliest well-known example (A) Napster (C) Failure Recovery	le of a PTP / overlay network (B) Device (D) Multitenancy	1	2	4	
17.	MeSDN is	(B) Mobile External of SDN(MeSDN) (D) Motor Extension of SDN(MeSDN)	1	2	5	
18.	is an extremely popular licensing for (A) GCL (C) GPC	m (B) GPL (D) GPF	1	2	5	
19.	The	empromise between the strong copyleft endly Apache license. (B) Extra Public License (EPL) (D) Eclipse Pulse License (EPL)	1	2	5	
20.	of the switch side of an OpenFlow implement (A) GPL (C) OGS	re-complete open source implementation natation (B) OTS (D) OVS	1	2	5	
	PART - B ($5 \times 4 = 20$) Answer any 5 Que		Marks	BL	CO	
21.	Describe the need for SDN.		4	2	1	
22.	Write short notes on fundamental Characteri	stics of SDN	4	2	2	
23.	Describe about the limitations OpenFlow		4	2	3	
24.	Elaborate the SDN Use Cases in the Data Ce	enter	4	2	4	

25.	Describe the following • Profiles of SDN open source users • Potential novel applications of open SDN	4	1	5
26.	Brief abut the following • Data center • Demands of data center	4	2	4
27.	Brief about the SDN Devices	4	2	2
	PART - C (5 × 12 = 60 Marks) Answer all Questions	Mark	s BL	СО
28.	 (a) Describe about the following i) Moving Information Between Planes and Importance of the Separation of planes ii) Distributed Control Planes and Creating the IP Underlay (OR) 	12	2	1
	 (b) Brief about the following (i) Load Balancing and High Availability, (ii) Creating the MPLS Overlay, Replication and , Route Servers 			
29.	 (a) Explain the SDN devices and SDN controller with necessary diagram (OR) (b) What are the functionality of the following i)VMware and Nicira ii) Mininet, NOX/POX and Big Switch Networks/Floodlight 	12	2	2
30.	(a) Draw the OpenFlow architecture and explain in detail on the openflow switch and openflow controller. (OR)	12	2	3
	 (b) Describe about the following i) Network programmability and the management interface ii) Publish and subscribe interfaces and XMPP 			
31.	(a) Write about the tunneling technologies and path technologies in the for the data center (OR)	12	2	4
	(b) Explain about the real-world data center implementations, optical networks, mobile networks and In-line network functions.			
32.	 (a) Describe about the following i) Open source licensing issues, profiles of SDN open source users ii) Switch implementations and controller implementations (OR) 	12	2	5
	(b) Explain the SDN and NFV mobile network architectures with a neat diagram.			

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