

29. a. Enumerate the data center demands.

10 4 4 1

(OR)

b. How SDN is related to wide area networks?

10 3 4 1

30. a. Explain different categories of open source licenses.

10 3 5 1

(OR)

b. Discuss about open source open flow switch implementation.

10 4 5 1

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Reg. No.

B.Tech. DEGREE EXAMINATION, NOVEMBER 2022

Sixth and Seventh Semester

18ECE320T – SOFTWARE DEFINED NETWORKS

(For the candidates admitted from the academic year 2018-2019 to 2019-2020)

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** should be answered in answer booklet.

Time: 2½ Hours

Max. Marks: 75

PART – A (25 × 1 = 25 Marks)

Answer **ALL** Questions

- | | Marks | BL | CO | PO |
|--|-------|----|----|----|
| 1. A number of universities collaborated to propose a new standard for networking called _____
(A) Open flow (B) Linux
(C) VMware (D) XEN | 1 | 1 | 1 | 1 |
| 2. The action that is not taking at the data plane is _____
(A) Forward (B) Drop
(C) Count (D) RIB matching | 1 | 2 | 1 | 1 |
| 3. The _____ was a multicast server that handled bum traffic for a specific elan.
(A) Bus- (B) LEC
(C) LECS (D) LES | 1 | 2 | 1 | 1 |
| 4. _____ environment encourage vendor lock in.
(A) Open (B) Closed
(C) Mixed (D) Autonomous | 1 | 2 | 1 | 1 |
| 5. The _____ is programmed once the RIB is deemed consistent and stable.
(A) Punt path (B) FIB
(C) RIB (D) Data server | 1 | 2 | 1 | 1 |
| 6. Which is not a trait of SDN?
(A) Plane separation (B) Simplified device
(C) Distributed control (D) Network automation | 1 | 2 | 2 | 1 |
| 7. SDN applications are part of the _____ layer.
(A) Application (B) Network
(C) Physical (D) Session | 1 | 2 | 2 | 1 |
| 8. The main drawback of API based SDN method is _____
(A) Use of standard TCP port (B) Firewall is not required
(C) Extensibility (D) Does not provide network wide view | 1 | 2 | 2 | 1 |

9. _____ was developed with major contributions from UC Berkeley. 1 1 2 1
 (A) ONIX (B) NOX
 (C) MININET (D) NICIRA
10. The primary job of PLEXXI controller is to gather information about 1 2 2 1
 (A) Affinities dynamically from external system (B) Affinities dynamically from internal system
 (C) Routing dynamically from external system (D) Routing dynamically from internal system
11. Open flow protocol define communication between 1 2 3 1
 (A) Controller and application (B) Controller and switch
 (C) Switch and application (D) Switches
12. _____ is not a matching field used by the packet matching function. 1 2 3 1
 (A) Switch input port (B) IP source address
 (C) VLAN ID (D) MAC address
13. _____ is not a additional functionality in open flow 1.3. 1 2 3 1
 (A) A multipart_request/multipart_reply message pair (B) More flexible table miss flow entry support
 (C) Per user_per byte basis meter (D) Per flow basis meter
14. _____ are used to track statistics relative to the flow in a flow table. 1 2 3 1
 (A) Counter (B) Header
 (C) Action field (D) Port information
15. _____ are emitted asynchronously in response to some event within the network element. 1 2 3 1
 (A) Commands (B) Notifications
 (C) Queries (D) Responses
16. Organizations that provide specialized data center services on behalf of other client organizations are categorized as 1 2 4 1
 (A) Private single tenant (B) Private multi tenant
 (C) Public single tenant (D) Public multi tenant
17. Google data center follows _____ SDN implementation. 1 1 4 1
 (A) Overlay (B) Underlay
 (C) Open (D) Closed
18. The encapsulation of entire layer two MAC frame inside an IP packet is called _____ tunneling. 1 2 4 1
 (A) MAC in MAC (B) IP in IP
 (C) MAC in IP (D) IP in MAC

19. _____ is not the functional component of Hadoop. 1 2 4 1
 (A) Client (B) Master
 (C) Slave (D) Network slicer
20. Blacklist is a list of _____ that are known or suspected to be malicious. 1 2 4 1
 (A) IP address (B) MAC address
 (C) TEP (D) TCP segment
21. _____ incorporates the notion of copy left. 1 2 5 1
 (A) Apache (B) Foss
 (C) GPL (D) BSD
22. _____ is a network management application for the floodlight controller. 1 2 5 1
 (A) Quagga (B) Avior
 (C) Bird (D) Pantou
23. The compute function in open stack is called 1 2 5 1
 (A) Swift and cinder (B) Horizon
 (C) NOVA (D) Glance
24. Open flow energy saving mechanism in the data center is 1 2 5 1
 (A) Elastic tree (B) Mobile traffic off load
 (C) Hiding IP address (D) Multicore ASIC card
25. _____ is a data plane function. 1 2 5 1
 (A) Mobility management (B) Charging and accounting
 (C) User authentication (D) Access control

PART – B (5 × 10 = 50 Marks)

Answer ALL Questions

- | | Marks | BL | CO | PO |
|--|-------|----|----|----|
| 26. a. Explain the functionalities of control plane and data plane and illustrate how information exchange takes place between them. | 10 | 3 | 1 | 1 |
| (OR) | | | | |
| b. Discuss about hybrid architecture models of SDN. | 10 | 3 | 1 | 1 |
| 27. a. Expound the five essential traits of SDN. | 10 | 3 | 2 | 1 |
| (OR) | | | | |
| b. Illustrate about NICira NVP controller and its relationship to idealized SDN framework. | 10 | 4 | 2 | 1 |
| 28. a. How puppet helps system administrators to manage infrastructure? | 10 | 4 | 3 | 1 |
| (OR) | | | | |
| b. Enumerate the messages exchanged between the controller and switch. | 10 | 4 | 3 | 1 |