

Five Years Integrated M.Sc. I.T. (Sem.-2) (S. D. Web. & Mobile) Examination

Computing as a Career

Time : 2-30 Hours]

April 2019

[Max. Marks : 70

Instructions:

1. Figures to the right indicates full marks
2. Neat diagrams must be drawn wherever necessary.

Q. 1) (A) Explain the data encapsulation/de-encapsulation process of OSI reference model. (14 Marks)

OR

Answer the following Question in two-three lines:

- 1) What types of cables are used to communicate tier 1 ISPs?
- 2) What is VPN? Explain the types of VPN.
- 3) Define the IaaS model of cloud computing.
- 4) Give any four example of Application software.
- 5) What is virtualization and what are its advantages?
- 6) State the difference between TCP and UDP?
- 7) How does the DHCP work?

(B.) Choose the appropriate option for the following questions: (Any Four) (04 Marks)

- 1) What is the default subnet mask of class-A network?
 - a. 255.255.255.0
 - b. 255.255.0.0
 - c. 255.0.0.0
 - d. None of above
- 2) What type of server is used to store vast volume of data in data farms?
 - a. Back-end Servers
 - b. Front-end Servers
 - c. Mid-end Servers
 - d. Web-end Servers
- 3) You have computer with IP address 172.16.25.2. What class is this address?
 - a. Class A
 - b. Class B
 - c. Class C
 - d. Class D
- 4) Which protocol is responsible for resolving IP address to hardware address?
 - a. DNS
 - b. DHCP
 - c. ARP
 - d. RARP
- 5) Which server provides ability to send instant messages across network?
 - a. DNS Server
 - b. SNMP Server
 - c. Gateway Server
 - d. Messaging Server
- 6) Which of the followings should not be placed at front-end server?
 - a. Firewall Server
 - b. Proxy Server
 - c. Database server
 - d. Web Server

Q-2) (A) What is service? What are the tasks that should be performed by process owner? (14 Marks)

OR

What is system software? Explain the types of system software.

(B) Answer the following questions in one-two lines. (Any four) (04 Marks)

- 1) What is the purpose of attaching switch in your network?
- 2) Define peering at ISP1.
- 3) What does the session layer of OSI model do?

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- 4) What purposes can be served by installing print server?
- 5) Define the term: Data center.
- 6) Explain blade server.

Q-3) (A) Explain the N-Tire Architecture. What are its advantages?

(14 Marks)

OR

Match the service name with its correct port number and its function.

NO	Service Name	Port no	Function
1	FTP	23	Resolve hostname to IP address
2	POP3	3389	Gather and manages network info
3	Telnet	110	Used for File transfer
4	DNS	161	Used for sending mails
5	SMTP	53	Used for remote access
6	SNMP	21	Used for downloading mail
7	RDP	25	Access Remote machine from cmd

(B) Choose appropriate option for following questions. (Any Three)

(03 Marks)

- 1.) Which protocol from followings, can work at both TCP and UDP?
a. FTP b. HTTP c. DHCP d. DNS
- 2.) Which of the following server cost the lowest?
a. Tower Server b. Blade Server c. Rack Mount Server d. None of above
- 3.) What is the private address range of class B?
a. 192.168.0.0-192.168.255.255 c. 192.167.0.0-192.167.255.0
b. 172.16.0.0-172.31.255.255 d. 10.0.0.0-10.255.255.255
- 4.) The Switch works at _____ layer of OSI Reference model.
a. Physical b. Data link c. Network d. Internet
- 5.) Which Cloud service model gives the consumer the ability to use application provided by the cloud provider over internet?
a. SaaS b. PaaS c. IaaS d. CaaS

Q-4) (A.) What are the key element of backup and recovery plan?

(14 Marks)

OR

What is service? Explain the life cycle of service.

(B.) Answer the following questions in 1 or 2 sentences. (Any Three)

(03 Marks)

- 1.) Define ring topology.
- 2.) State the protocols which work at data link layer of OSI Model.
- 3.) What is high availability?
- 4.) Why do you need public IP address to communicate to internet?
- 5.) State if the given statement is true or false:
IPv4 is of 32 bits and represented in decimal format.

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