**Computer Network**

**BCS**

**MCQ (1x30=30)**

Q1. **DHCP Server provides \_\_\_\_\_ to the client.**

A. Protocol B.IP Address

C. MAC Address D. Network Address

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| Q2.Which of the following are benefits of VLANs?   1. They increase the size of collision domains. 2. They allow logical grouping of users by function. 3. They can enhance network security. 4. They increase the size of broadcast domains while decreasing the number of collision domains. 5. They simplify switch administration. 6. They increase the number of broadcast domains while decreasing the size of the broadcast domains.   A.1 and 5 B 2 and 4  C 1,3,and 5 D 2,3 and 6 |
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Q3. What is Broadcast MAC Address ?

A.EE-EE-EE-EE-EE-EE B.FF-FF-FF-FF-FF-FF

C.AA-AA-AA-AA-AA-AA D.one of above

Q4. **Which of the following is not the possible ways of data exchange?**

A. Simplex B. Multiplex

C. Half-duplex D. Full-duplex

Q5. **The management of data flow between computers or devices or between nodes in a network is called**

A. Flow control B. Data Control

C. Data Management D. Flow Management

Q6. **Controlling access to a network by analyzing the incoming and outgoing packets is called**

A. IP Filtering B. Data Filtering

C. Packet Filtering D. Firewall Filtering

Q7.What is the size of Source and Destination IP address in IPv4 header?

A. 8 bytes B. 16 bytes

C. 32 bytes D. all

Q8.Find the parity bit for 1011011

A.0 B.1

C.2 D.None

Q9.Traditionally, the Internet checksum is

A.8-bit B.16-bit

C.24-bit D.32-bit

Q10. **The amount of data that can be carried from one point to another in a given time period is called**

A. Scope B. Capacity

C. Bandwidth D. Limitation

Q11. **For error detection \_\_\_\_\_\_\_\_ is used by the higher layer protocols (TCP/IP).**

A. Bit-sum B. Checksum

C. Data-sum D. Error-bit

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Q12. The domain name system is maintained by

A. Distributed database system B. a single server

C. a single computer D.) none of the mentioned

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| Q13.What is the subnetwork address for a host with the IP address 200.10.5.128/25?  A. 200.10.5.56 B. 200.10.5.32  C. 200.10.5.64 D. 200.10.5.128 |
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Q14.Which one of the following task is done by data link layer?

A. framing B. error control

C. flow control D. all

Q15. **Which of the following layer is not network support layer?**

A. Transport Layer B. Network Layers

C. Data link Layer D. Physical Layer

Q16.Segmentation and reassembly is the responsibility of

A.7th Layer B.6th Layer

C.5th Layer D.4th layer

Q17. **The duration of time it takes to send a message from one end of a network to the other and back is called**

A. Round Trip Time (RTT) B. Full Duplex Time (FDT)

C. Circle Trip Time (CTT) D.DataTravellingTime (DTT)

Q18.When a router needs to send a packet destined for another network, it must know the

A.Datagram B.Medium

C.Path Flow D.IP Address

Q19. **The processes on each machine that communicate at a given layer are called**

A. UDP process B. Intranet process

C. Server technology D. Peer-peer process

Q20.Wildcard domain names start with label

A. @ B. \*

C. & D. #

Q21.The 128-bit IP address consists of

A. network address B. host address

C. both network address & host address D.none of the mentioned

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| Q22.You need to subnet a network that has 5 subnets, each with at least 25 hosts. Which subnet mask would you use?  A.255.255.255. B. 192.255.255.255.224  C.255.255.255.240 D. 255.255.255.248 |
| Q23.What is the function of a router?   |  | | --- | | 1. converting the data from one format to another | | 1. Forward the packet to the up links | | 1. error detection in data | | 1. None of the above |   Q24. **A set of rules that govern all aspects of information communication is called**  A. Server B. Internet  C. Protocol D. OSI Model   |  | | --- | | Q25.To test the IP stack on your local host, which IP address would you ping?   1. 127.0.0.0 B.1.0.0.127   C.127.0.0.1 D.127.0.0.255 | |  | |
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Q26.An RPC (remote procedure call) is initiated by the

1. Server B.Client

C. both (a) and (b) D.none of the mentioned

Q27.Network layer firewall works as a

A. Frame filter B. Packet filter

C. Both Frame as well as Packet filter D. None of the mentioned

Q28.In a simple echo-request message, the value of the sum is 01010000 01011100. Then, value of checksum is

A. 10101111 10100011 B. 01010000 01011100

C. 10101111 01011100 D.) 01010000 10100011

Q29.The data link layer takes the packets from \_\_\_\_\_\_\_\_\_ and encapsulates them into frames for transmission.

A. network layer B. physical layer

C. transport layer D. application layer

Q30. A DNS client is called

A. DNS updater B. DNS resolver

C. DNS handler D. none of the mentioned

**Short Answer questions ( 6x5=30)**

Q1. Define Computer Network? What are the features of Computer network? Explain (2+4)

(Chapter 1)

Q2. What is communication system? Explain the basic block diagram of communication system?(2+4)

(Chapter 2)

Q3. What is router? What is different between router and switch? (1+5) (Chapter 4)

Q4. What is CRC? Explain the CRC with example. (1+5) ( Chapter 7)

Q5. What is difference between DV and LS routing protocol . (6) (Chapter 5)

Q6. What is physical address? Explain the basic structure of UDP protocol. (2+4) (Chapter 5)

Q7 Compare and contrast the connection oriented service and connectionless service. (6)

(Chapter 6)

Q8. What is DNS? Why it is decentralized? List out the Features of DNS.(1+3+2) (Chapter 3)

**Long Answer questions:(2x20=40)**

1.

a. Define transmission media. Differentiate between guided and unguided transmission media. Discuss each guided transmission in detail . (1+4+5)

(Chapter 3)

b. Define Protocol Stack. Explain OSI model with neat diagram. (3+7)

Chapter 3

2.

a. what is Subnetting? Mentions its pros and cons. Explain the class C Subnetting with example. (2+3+5)

(Chapter 4)

b. What is FLSM? How it is differ form VLSM? *You are in charge of a network that allows a total of 254 (256-2) users (192.168.10.0/24), but the company has a total of 106 employees; 4 in HR, 4 in Accounting, 2 in Legal, 11 in IT, 55 in Sales and 30 in the Warehouse. You need to create subnets that would allow for these number of users and prevent the waste of IP addresses as much as possible. (1+2+7) (*Chapter 4)

3.

a. Explain client server system. How is it different from peer to peer system? (4+6)

(Chapter 5)

b. Explain how does CRC detect the errors with multiple bits? Given message is M(x) = x2+x4+x3=x2+1 and the generator is G(x) = x3+1. Show the actual bit string transmitted, suppose the third bit from the left is inverted during the transmission. Show how the error is detected at

the receiver’s end. (3+7)

(Chapter 6)