

**CREDIT BASED FOURTH SEMESTER B.C.A. DEGREE EXAMINATION  
APRIL 2012  
B. C. A.**

**COMPUTER NETWORKS**

**Time: 3 Hrs**

**Max. Marks: 120**

**PART – A**

**1. Answer any 15 Questions from the following:**

**15x2=30**

- a) Define computer network.
- b) What is DNS?
- c) What is broadcasting?
- d) What is a datagram?
- e) What are keep alive messages?
- f) What is DoD model?
- g) What is PPP?
- h) What is active hub?
- i) Expand IETF?
- j) With which cable is BNC connector used?
- k) What is the purpose of ICMP testing?
- l) Why IP addresses are written in dotted decimal notation?
- m) What do you mean by encryption?
- n) What is the purpose of port numbers?
- o) What happens if a router cannot locate a destination address?
- p) Define Internet.
- q) What is infrastructure mode?
- r) What is back off time?

**PART – B**

**Answer any two questions from each unit:**

**UNIT – I**

2. a) Explain the TCP/IP reference model.  
b) Explain Gigabit Testbeds. **(10+5)**
3. a) Explain LAN, WAN and MAN with neat diagrams.  
b) Write a note on wireless networks. **(10+5)**
4. a) Explain Flow control and windowing in transport layer.  
b) Explain Novell Netware. **(8+7)**

### UNIT – II

5. a) Define topology. Explain in detail how a bus topology works.  
b) Write a note on: i) coaxial cable ii) unshielded twisted pair cable. **(9+6)**
6. a) Explain MAC address.  
b) Write a note on Hubs and Routers.  
c) What are the various wiring standards used in the physical layer? **(4+8+3)**
7. a) Explain the operation of Ethernet 802.3 and its broadcasting.  
b) Explain CSMA/CD. **(8+7)**

### UNIT – III

8. a) Explain ARP requests and ARP replies.  
b) What is Subnet masking? Explain ANDing operation with an example. **(7+8)**
9. a) Assume IP host address 192.168.5.121. If the network is a class C network using 5-bits for subnetting, find the subnet mask, subnet address, host address and broadcast address.  
b) Explain IP datagram. **(9+6)**
10. a) Explain TCP/IP transport layer with the TCP/IP segment format.  
b) Explain UDP segment format and default gateway. **(8+7)**

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COA 404

Reg. No. ....

**CREDIT BASED FOURTH SEMESTER B.C.A. DEGREE EXAMINATION  
APRIL 2013  
B. C. A.**

**COMPUTER NETWORKS**

**Time: 3 Hrs**

**Max. Marks: 120**

**PART – A**

**Note: Answer any 15 questions from the following:**

**15x2=30**

1.
  - a) What is datagram?
  - b) What is broadcasting?
  - c) What is client server model?
  - d) Which are the two layers of data link layer?
  - e) What in MAC address?
  - f) Define Topology.
  - g) What is Active Hub?
  - h) What is collision domain?
  - i) What is infrastructure mode?
  - j) What is backoff time?
  - k) What is an IP address?
  - l) Define default gateway.
  - m) What is a concentrator?
  - n) Why IP addresses are written in dotted decimal notation?
  - o) What is Terminator?
  - p) Which are the different classes of network addresses?
  - q) What is PPP?
  - r) What do you mean by encryption?

**PART – B**

**Note: Answer any two questions from each unit:**

**UNIT – I**

2.
  - a) Explain OSI model briefly.
  - b) Explain network Hardware. **(10+5)**
3.
  - a) Write a note on
    - i) Internet
    - ii) Wireless networks
  - b) Explain broadcast and point-to-point technologies. **(10+5)**

4. a) Explain the advantages and disadvantages of LAN, MAN and WAN.  
b) What do you mean by standards? Explain IEEE standards briefly. (6+9)

**UNIT – II**

5. a) Explain STP and UTP cables.  
b) Explain the purpose of NIC.  
c) Explain physical and logical topology. (6+4)+5)
6. a) Explain the purposes of networking devices.  
b) Define and describe Hubs and Bridges.  
c) What are the criteria for selecting a proper network media? (4+8+3)
7. a) Explain how Bus topology works?.  
b) Explain CSMA/CD. (8+7)

**UNIT – III**

8. a) Explain IP datagram.  
b) Write a note on port number in TCP|IP.  
c) Describe ICMP. (6+4+5))
9. a) Explain ARP and RARP.  
b) Describe the function of application and transport layer of TCP|IP. (7+8)
10. a) Explain TCP sliding window.  
b) Explain UDP segment format. (8+7)

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**CREDIT BASED FOURTH SEMESTER B.C.A. DEGREE EXAMINATION**

**APRIL 2014**

**B.C.A**

**COMPUTER NETWORKS**

**Time: 3 Hrs**

**Max. Marks: 120**

## PART – A

1. Answer any Fifteen questions from the following:

15x2=30

- a. Define internetwork.
- b. What are the four main characteristics of LANs?
- c. What is a packet?
- d. What is broadcasting?
- e. Write a note on wireless network.
- f. What do you mean by encryption?
- g. What is MAC address?
- h. Define topology.
- i. Write the advantages and disadvantages of Bus topology.
- j. What is active Hub?
- k. What is a concentrator?
- l. Why IP addresses are written in dotted decimal notation?
- m. What is data compression?
- n. What is subnet masking? Explain.
- o. What is ad-hoc mode?
- p. Define default gateway.
- q. What do you mean by active and passive Hub?
- r. Define attenuation.

## PART – B

Answer any TWO questions from each unit:

### UNIT – I

2. a. Explain the TCP/IP reference model.  
b. Compare OSI and TCP/IP model. (10+5)
3. a. Explain LAN, MAN and WAN with neat diagram.  
b. Write a note on FTP & SMTP. (10+5)
4. a. Explain Novell Netware.  
b. Describe the process of acknowledgement in transport layer and identify acknowledgement techniques and their purposes. (7+8)

### UNIT – II

5. a. Explain the following with a neat diagram.
  - i) Star topology
  - ii) Ring topology
  - iii) Mesh topology

- b. Explain broadcast and point to point technologies. (10+5)
6. a. Write a note on the following  
 i) Twisted pair cable  
 ii) Fiber optic cable  
 b. Explain CSMA/CD (8+7)
7. a. Write a note on Repeaters and Routers.  
 b. Explain the operations of Ethernet 802.3 and its broadcasting. (8+7)

**UNIT – III**

8. a. Write a note on classes of IP addresses.  
 b. Explain TCP/IP transport layer with the TCP/IP segment format. (7+8)
9. a. Explain ARP request and ARP replies.  
 b. Assume IP hosts address 192.168.5.121. If a network is a class C network using 5 bits for sub netting, find subnet mask, subnet address, host address and broadcast address. (6+9)
10. a. Explain IP datagram.  
 b. What is subnet masking? Explain ANDing operation with an example. (6+9)

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Reg. No. ....

**CREDIT BASED FOURTH SEMESTER B.C.A. DEGREE EXAMINATION  
 APRIL 2015  
 B.C.A  
 COMPUTER NETWORKS**

Time: 3 Hrs

Max. Marks: 120

**PART – A**

1. Answer any Fifteen questions from the following: 15×2=30
- a. Explain the uses of computer networks.  
 b. Which are the three main categories of networks?  
 c. What is a datagram?  
 d. What is data encapsulation?

- e. What is DNS?
- f. Write a note on network interface cards.
- g. What are RJ connectors and what is its significance?
- h. What is an IP address?
- i. Write a note on HDLC.
- j. What is PPP?
- k. Write the advantages and disadvantages of bus topology.
- l. What do you mean by dotted-decimal notation?
- m. What is the purpose of port numbers?
- n. What is default gateway?
- o. Is TCP a reliable protocol? Explain.
- p. What are the two protocols used in transport layer of TCP/IP?
- q. Write a note on Hub.
- r. What is back off time?

## PART – B

**Answer any TWO questions from each unit:**

### UNIT – I

2. a. Explain the OSI reference model with a neat diagram.  
b. Write a note on presentation layer. **(10+5)**
3. a. Explain LAN, MAN and WAN with neat diagram.  
b. Write a note on wireless networks. **(10+5)**
4. a. Explain Novell Netware.  
b. Explain flow control and windowing in transport layer. **(7+8)**

### UNIT – II

5. a. Explain the following with a neat diagram.  
i) Bus topology                      ii) Star topology                      iii) Hybrid topology  
b. Write a note on coaxial cable. **(10+5)**
6. a. Write short notes on              i) Repeaters                      ii) Routers  
b. Explain the operation of Ethernet 802.3 and its broadcasting. **(8+7)**
7. a. Explain MAC address.  
b. Write a note on Networking media cable.  
c. Explain CSMA/CD. **(4+5+6)**

### UNIT – III

8. a. Write a note on classes of IP address.  
b. What is subnet masking? Explain ANDing operation with example. (7+8)
9. a. Explain IP datagram.  
b. Explain i) RARP Servers, ii) RARP Request and RARP reply formats. (5+10)
10. a. Assume IP hosts address 172.16.3.15 if the network is a class B network using 10 bits for subnetting, find subnet mask, subnet address, Host address and broadcast address.  
b. Explain UDP segment format and default gateway. (9+6)

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**B.C.A****COMPUTER NETWORKS**

Time: 3 Hrs

Max. Marks: 120

**PART – A**

1. Answer any 15 questions from the following: 15x2=30
- a. Define computer network.
  - b. What is default gateway?
  - c. What do you mean by video conference?
  - d. Define Packet.
  - e. What is DNS?
  - f. Write the purpose of a passive Hub.
  - g. What is a concentrator?
  - h. What do you mean by signals?
  - i. What is Multistation access unit (MAU)
  - j. Write the purpose of port number.
  - k. What is Subnet?
  - l. Which are the two protocols used in Transport layer of TCP/IP?
  - m. What is reserved IP address?
  - n. List which internetworking devices have ARP cables.
  - o. What is a collision domain?
  - p. What is infrastructure mode?
  - q. What is analog and digital signal?
  - r. Define Attenuation.

**PART – B**

Answer any TWO full Questions from each unit:

**UNIT – I**

2. a. What are the uses of computer networks? Explain.  
b. Explain LAN, WAN and MAN with a neat diagram (6+9)
3. a. Write a note on TCP/IP model.  
b. Explain ARPANET. (10+5)
4. a. Explain dialog control and dialog separation.  
b. Explain flow control and windowing in transport layer. (8+7)

**UNIT – II**

5. a. Explain MAC address.  
b. Write a note on Co-axial and fiber optic cables.  
c. Describe the functionality of LAN. (4+6+5)

6. a. Define and describe repeaters and routers.  
b. What is Star topology? Explain with the help of a neat diagram. (8+7)

7. a. Explain the operation of Ethernet 802.3 broadcasting.  
b. Explain Data link layer of OSI model. (8+7)

### UNIT – III

8. a. What is subnet masking? Explain Anding operation with an example.  
b. Explain RARP request frame and replies. (8+7)
9. a. Assume IP host address 172.16.2.120. If the network is a class B network using 8 bits for subnetting, find subnet mask, subnet address, host addresses and broadcast address.  
b. Explain TCP handshake/Open connection. (9+6)
10. a. Describe the function of transport and network layer in TCP/IP.  
b. Explain ICMP testing. (8+7)

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