ISLAMIAH COLLEGE [AUTONOMOUS], VANIYAMBADI
U3CSSB41   APRIL – 2015
COMPUTER NETWORKS
TIME: 3 Hrs.   MAX. MARKS: 75

PART - A (2X10=20 MARKS)
Answer All Questions

1. What is a Network?.
2. Define protocol.
3. Mention any 5 Standards Organizations,
4. What is Piggybacking?
5. What are periodic signals?
6. What are Internetworks?
7. What is the function of the Physical Layer?
8. What is meant by Encryption?
9. List the layers of the OSI model.
10. What is meant by Flow Control?

PART - B (5 X 5 = 25 MARKS)
Answer ALL the Questions

11. (a) Differentiate Transmission & Communication,
   (OR)
   (b) Write a brief note on the components of a Communication system.

12. (a) Write a **brief essay on Transmission Media**
   (OR)
   (b) Explain the various aspects of Digital to Analog Conversion.

13. (a) Explain DTE & DCE Intrrfaces.
   (OR)
   (b) Write short notes on MODEMs.

14. (a) Explain in detail about TDM & WDM.
   (OR)
   (b) Explain RSA algorithm with example.

15. (a) Explain briefly about Data Compression,
   (OR)
   (b)Explain the various types of Switching.

PART - C (3 X 10 = 30 MARKS)
Answer any THREE Questions

16. Explain in detail the various Network Topologies with appropriate examples.

17. Compare CRC, LRC & VRC.

18. Explain the Sliding Window Protocols with examples.

19. Compare OSI & TCP/IP models.

20. Write Short notes on the following:
   (i) ADSL (ii) DNS

ISLAMIAH COLLEGE [AUTONOMOUS], VANIYAMBADI
U3CSSB41   APRIL – 2015
COMPUTER NETWORKS
TIME: 3 Hrs.   MAX. MARKS: 75

PART - A (2X10=20 MARKS)
Answer All Questions

1. Define line configuration.
2. What are the types of transmission modes?
3. What is meant by transmission time?
4. Write down the functions of the Data Link layer.
5. What are periodic signals?
6. What is meant by ASK?
7. What are the types of Guided transmission media?
8. What is MTSO?
9. What is Multiplexing? What are its types?
10. What is meant by Burst Error?

PART - B (5 X 5 = 25 MARKS)
Answer ALL the Questions

11. (a) What is Data Communication? Explain briefly its properties.
   (OR)
   (b) Explain Distributed Processing giving its advantages & limitations.

12. (a) Compare parallel & Serial Transmission.
   (OR)
   (b) Write a brief note on Analog to Analog Modulation.

13. (a) Explain Analog To Digital conversion,
   (OR)
   (b) Write short notes on Satellite Communication.

14. (a) Explain briefly about WDM.
   (OR)
   (b) Write a brief essay on ADSL.

15. (a) Explain ATM briefly,
   (OR)
   (b) Write a brief essay on X.25 layers.

PART - C (3 X 10 = 30 MARKS)
Answer any THREE Questions

16. Explain Error Detection & Error Detection in detail.

17. Explain OSI reference model in detail.

18. Write in detail about Data Link Protocols.

19. Explain any two Routing algorithms.

20. Write short notes on the following:
   (i) HTTP (ii) WWW.

ISLAMIAH COLLEGE [AUTONOMOUS], VANIYAMBADI	
END SEMESTER EXAMINATIONS	
U3CSSB41/U3SWSB41/U3BCSB41	APRIL/MAY-2017
COMPUTER NETWORKS	
Time: 3 Hrs	Max.Marks:75

PART - A (10 X 2 = 20)
Answer ALL the Questions

1. What is a Network?

2. What are the types of transmission modes?

3. Mention any 5 Standards Organizations.

4. Write down the functions of the Data Link layer.

5. What are periodic signals?

6. What is meant by ASK?

7. What is the function of the Physical Layer?

8. What is MTSO?

9. List the layers of the OSI model.

10. What is meant by Burst Error?

PART – B (5 X 5 = 25)
Answer ALL the Questions

11. (a) Differentiate Transmission & Communication
       (OR)
    (b) Explain Distributed Processing giving its advantages & limitations.

12. (a) Write a brief essay on Transmission Media
       (OR)
    (b) Write a brief note on Modulation.

13. (a) Explain DTE & DCE Interfaces.
       (OR)
    (b) Write short notes on Satellite Communication.

14. (a) Explain in detail about TDM & WDM.
       (OR)
    (b) Write a brief essay on ADSL.

15. (a) Explain briefly about Data Compression.
       (OR)
    (b) Write a brief essay on X.25 layers.

PART - C (3 X 10 = 30)
Answer any THREE Questions

16. Explain in detail the various Network Topologies with appropriate examples.

17. Explain OSI reference model in detail.

18. Explain the Sliding Window Protocols with examples.

19. Explain any two Routing algorithms.

20. Write Short notes on the following:
       (i)FTP (ii) DNS

ISLAMIAH COLLEGE [AUTONOMOUS] VANIYAMBADI
ARREAR EXAMINATIONS, OCTOBER - 2018

Time: 3 Hrs   Max. Marks: 75

Subject: Computer Networks
Subject Code: U3CSSB41 / U3BCSB41

PART - A (10 X 2 = 20)
Answer ALL the Questions

1. What are the goals of a network?

2. List the various guided media used for transmission.

3. Define Multiplexing.

4. What is circuit switching?

5. Define Reliable flooding?

6. Write the keys for understanding the link state routing?

7. What is a repeater?

8. Define firewalls and gateways.

9. How does MIME enhance SMTP?

10. Discuss the three main division of the domain name space.

PART - B (5 X 5 = 25)
Answer ALL the Questions

11. (a).Explain the functions of layers of ISO-OSI model
(Or)
(b). Describe the components of optical fiber cable.

12. (a) Discuss the concept of redundancy in error detection and correction.
(Or)
(b). Discuss the principle of stop and wait protocol

13. (a) Compare and contrast a circuit-switched network and a
packet-switched network.
(Or)
(b) Compare space-division and time-division switches.

14. (a). Enumerate the differences between Static and Dynamic Routing

(Or)
(b). Explain the RIP algorithm with a simple example

15. (a) Differences between Persistent and Non Persistent HTTP
(Or)
(b) Explain the components of DNS

PART - C (3 X 10 = 30)
Answer any THREE Questions

16. Explain about wireless propagation

17. Explain adaptive flow control in detail and its uses.

18. List four major components of a packet switch and their functions.

19. Discuss any TWO Routing algorithms.

20. Explain SMTP in detail.

Time: 3 Hrs   Max. Marks: 75

Subject: Computer Networks
Subject Code: U5CS5003 / U5SW5003 / U5BC5003

PART-A (10 X 2 = 20)
Answer ALL the Questions

1. Define data communication and network.
2. List out any four layers of OSI model
3. Expand VRC and LRC
4. Define Baud
5. Define Burst error.
6. Define Redundancy
7. Define the term gateways.
8. Expand PSTN
9. What is File Transmission Protocol?
10. Define Telnet

PART-B (5 X 5 = 25)
Answer ALL the Questions

11. (a) Discuss about categories of Network

(Or)

(b) Discuss about various components of data communication system

12. (a) Illustrate the concepts of Analog and digital signals.

(Or)

(b) Explain the details about decomposition of a digital signal

13. (a) Write short notes on periodic signals

(Or)

(b) Explain CRC generator

14. (a) Write notes on circuit switching

(Or)

(b) Explain bridges.

15. (a) Give notes on digital signals.

(Or)

(b) Explicate about DNS

PART-C (3 X 10 = 30)
Answer any THREE Questions

16. Explain the OSI reference model with neat sketch.

17. Explain Quadrature Amplitude modulation

18. Write short notes on

(a) Single bit error   (b) Burst error correction

19. Discuss about Routing Algorithms

20. Explain the following;

(A) TCP

(B) ARP

ISLAMIAH COLLEGE [AUTONOMOUS] VANIYAMBADI
END SEMESTER EXAMINATIONS, APRIL - 2019

Time: 3 Hrs   Max. Marks: 75
Subject: Computer Networks   **Sub. Code: U0BC4001**

PART-A (10 X 2 = 20)
Answer ALL Questions

1. What is a Frame?
2. Write any two uses of Networks
3. Define Multiplexing.
4. What do you mean by Routing?
5. Expand HDLC and QOS
6. Enumerate any two uses of WWW
7. What is Cryptography?
8. Compare cipher text and plaintext.
9. What is Piggybacking technique?
10. A Metropolitan Area Network, Mention the class type and its IP.

PART-B (5 X 5 = 25)
Answer ALL Questions

11. a). Give a note on Network Tools.
               (Or)
   b). Justify on FTP.

12. a) Explain on HDLC LAN Protocol Stack.
               (Or)
   b) Explicit on Domain Name Space.

13. a) What is Congestion Control?
               (Or)
   b) Define how a Stop and wait Protocol is used in flow control.

14. a) What are UDP and TCP? Explain with neat diagram.
               (Or)
   b) Write a comment on SMTP protocols, with neat diagram.

15. a) Write a note on Unguided Media Transmission with neat
     Diagram.
               (Or)
   b) Briefly explain Packet Delivery and forwarding in Network layer.

PART-C (3 X 10 = 30)
Answer any THREE Questions

16. Explain about Cryptography and Security.

17. What are the Duties of transport layer? Explain.

18. Justify on Go back N ARQ and Selective repeat ARQ with neat
     diagram.

19. Explain about Distance Vector Routing Algorithm.

20. Explicit about LAN, MAN, and WAN and their classes with neat
     diagram.

ISLAMIAH COLLEGE [AUTONOMOUS]-VANIYAMBADI-2
END SEMESTER EXAMINATIONS, MAY - 2019

TIME: 3 Hrs   MAX. 75 MARKS
Class: III BCA/III-B.Sc (CS/ECS/SW)   Semester-VI

Sub. Code: U5CC5003
Subject Name: Computer Networks

PART-A (10 X 2 = 20 MARKS)
Answer ALL Questions

1. What are the advantages of distributed processing?
2. Define performance, reliability and security.
3. Define the terms (i) period (ii) frequency
4. What is the bit rate of HDTV?
5. Define redundancy
6. What is Stop-and-Wait ARQ?
7. Write a short note on PSTN.
8. List three traditional switching methods.
9. What is MIME?
10. What is Network Security?

PART-B (5 X 5= 25MARKS)
Answer ALL Questions

11. a) What are the three criteria necessary for an effective and efficient network?
    (Or)
    b) What are standards? Name any four standard organizations.

12. a) Describe digital signal as a Composite analog signal.
    (Or)
    b) What is the purpose of cladding in an optical fiber?

13. a) Explain about the cyclic redundancy check with an example.

    (Or)
    b) Define flow control.Describe stop-and–wait flow control.

14. a) Compare space-division and time-division switches.
    (Or)
    b) What is TSI and its role in a time-division switching?

15. a) What is IP datagram? Differentiate between IP datagram format and TCP segment format.
    (Or)
    b) Explain the concept of FTP and TPTP.

PART-C (10X 3 = 30 MARKS)
Answer any THREE Questions

16. Draw basic block diagram of data communication systems and explain different components of system.

17. A non-periodic composite signal has a bandwidth of 200 KHz, with a middle frequency of 140 KHz and peak amplitude of 20V. The two extreme frequencies have an amplitude of 0. Draw the frequency domain of the signal.

18. Briefly explain how error detection and correction achieved by a network.

19. What is a network connecting device? List and explain different types of connecting devices in detail.

20. Compare the TCP header and UDP header. List the field in the TCP header that is missing from UDP header. Give the reason for their absence. List the advantages of one over the other.

PART - A (10 X 2 = 20)
Answer ALL the Questions

1. What are the goals of a network?

2. List the various guided media used for transmission.

3. Define Multiplexing.

4. What is circuit switching?

5. Define Reliable flooding?

6. Write the keys for understanding the link state routing?

7. What is a repeater?

8. Define firewalls and gateways.

9. How does MIME enhance SMTP?

10. Discuss the three main division of the domain name space.

PART - B (5 X 5 = 25)
Answer ALL the Questions

11. (a) Explain the five components of a data communication systems
(Or)
(b) Why are protocols needed and what are the key elements?

12. (a) Discuss the principle of stop and wait protocol
(Or)
(b) Explain stop and wait ARQ protocol.

13. (a) Compare space-division and time-division switches.
(Or)
(b) Explain about congestion control.

14. (a) Explain the RIP algorithm with a simple example.
(Or)
(b) Write short notes on   (i) Brouter   (ii) Multi-protocol router

15. (a) Differences between Persistent and Non Persistent HTTP
(Or)
(b) Explain the components of DNS

PART - C (3 X 10 = 30)
Answer any THREE Questions

16. Explain the OSI Network architecture specifying the functions of each layer.

17. Explain adaptive flow control in detail and its uses.

18. Write the Sliding Window Algorithm and explain it in detail.

19. Discuss any TWO Routing algorithms.

20. Explain SMTP in detail.

ISLAMIAH COLLEGE [AUTONOMOUS], VANIYAMBADI
END SEMESTER EXAMINATIONS, DECEMBER – 2020

Time: 3 Hrs   Max. 75 Marks
Subject: Computer Networks
Subject Code: U8CC5003 / U5CS5003 / U5BC5003

PART-A (10 X 2 = 20 MARKS)
Answer ALL Questions

1. List five components of a data communications system.

2. Name the factors that affect the performance of a network.

3. Define periodic and non-periodic signals.

4. What is bandwidth?

5. Define single-bit error and burst error

6. What is CRC?

7. Write a short note on PSTN.

8. What do you mean by routing protocol?

9. What is meant by data encapsulation?

10. Write a short note on network classes.

PART-B (5 X 5 = 25 MARKS)
Answer ALL Questions

11. (a). Define protocol. List the three key elements of a protocol. Why are protocols and standards needed?

(Or)

(b). Name the four basic network topologies, and cite advantages and disadvantages of each type.

12. (a) Distinguish between base band transmission and broad band transmission.

(Or)

(b) Discuss the different transmission impairments.

13. (a) What is Stop-and-Wait ARQ? Explain the need for sequence numbers and acknowledgement numbers?

(Or)

(b). Explain the conditions for stop-and-wait, Go-back-N and selective repeat protocols.

14. (a) Enumerate in detail about the Internet routing protocols.

(Or)

(b) Explain TDM System with its advantages & disadvantages.

15. (a). Distinguish between a physical address and a logical address?

(Or)

(b). What is dotted decimal notation? Where is it used? Explain the purpose of subnetting. How is masking related to subnetting?

PART-C (3 X 10 = 30 MARKS)
Answer any THREE Questions

16. Discuss network topologies in detail with their performance indicator. Also draw and show the hybrid topology with star as back bone and four ring network.

17. Explain the fiber optic cable in detail with its advantages and disadvantages.

18. It is necessary to formulate the Hamming code for four data bits D3, D5, D6 and D7, together with three parity bits P1, P2, and P4.
    a. Evaluate the 7-bit composite code word for the data word 0110.
    b. Evaluate the three check bits C1, C2, and C4, assuming no error.
    c. Assume an error in bit D5 during storage into memory. Show how the error in the bit is detected and corrected.

19. We need a three-stage space division switch with N=360. We use 40 crossbars at the first and third stages and 8 crossbars at the middle stage. (N is number of input lines)
    a. Draw the configuration diagram.
    b. Calculate the total number of cross points.
    c. Find the possible numbers of simultaneous connections.
    d. Find the possible number of simultaneous connections if we use one single crossbar.
    e. Find the blocking factor, the ratio of the number of connections in c and in d.

20. Draw the format of the UDP header and explain in brief the various fields.

PART-A(10 X 2 = 20)
Answer ALL the Questions

1. Define data communications.

2. What are the two types of line configuration?

3. Define single-bit error and burst error.

4. What is CRC?

5. What is switching?

6. Write short notes on internetworking issues.

7. List out the different types of connecting devices.

8. What do you mean by routing protocols?

9. What is HTTP protocol?

10. Define URL and Internet address?

PART-B(5 X 5 = 25)
Answer ALL the Questions

11. (a). What is meant by topology and explain the different topologies of a computer network.

(Or)

(b). For *n* devices in a network, find number of cable links required for a mesh, ring, bus, and star topology?

12. (a) Explain the use of parity check for error detection? What are the different types of errors detected by parity check?

(Or)

(b) What are the limitations of VRC and LRC?

13. (a) Describe Hub, Switch and Router in detail.

(Or)

(b) What is meant by data encapsulation? Explain data encapsulation in TCP/IP.

14. (a) Discuss the Distance Vector routing algorithm in detail with an example.

(Or)

(b). Explain Dijkstra's shortest path routing algorithms with example.

15. (a) Explain principal DNS resource record types and there meanings.

(Or)

(b) Explain the concept of FTP and TPTP.

PART-C(3 X 10 = 30)
Answer any THREE Questions

16. Discuss the organization of OSI model. What are the functions of OSI layers? Discuss.

17. A series of 8-bit message blocks is to be transmitted across data link using a CRC for error detection. A generator polynomial of 11001 is to be used. Explain CRC coding mechanism considering following message and generator polynomial: M : 110010101100101010 G=1010

18. Compare the TCP header and UDP header. List the field in the TCP header that is missing from UDP header. Give the reason for their absence. List the advantages of one over the other.

19. A router using distance vector routing has the following routing table:

Net	Hops	Router
Net 2	6	A
Net 3	4	E
Net 4	3	A
Net 6	2	D
Net 7	1	B

The router receives the following packet from router C:

Net	Hops
Net 2	4
Net 3	5
Net 4	2
Net 6	3
Net 7	2

Show the updated routing table for the router.

20. Elaborate in detail about SMTP and SNMP protocols with illustration.

PART - A (10 X 2 = 20)
Answer ALL the Questions

1. What are the goals of a network?

2. List the various guided media used for transmission.

3. Define Multiplexing.

4. What is circuit switching?

5. Define Reliable flooding?

6. Write the keys for understanding the link state routing?

7. What is a repeater?

8. Define firewalls and gateways.

9. How does MIME enhance SMTP?

10. Discuss the three main division of the domain name space.

PART - B (5 X 5 = 25)
Answer ALL the Questions

11. (a) Explain the five components of a data communication systems
                                    (Or)
    (b) Why are protocols needed and what are the key elements?

12. (a) Discuss the principle of stop and wait protocol
                                    (Or)
    (b) Explain stop and wait ARQ protocol.

13. (a) Compare space-division and time-division switches.
                                    (Or)
    (b) Explain about congestion control.

14. (a) Explain the RIP algorithm with a simple example.
                                    (Or)
    (b) Write short notes on (i) Brouter (ii) Multi-protocol router

15. (a) Differences between Persistent and Non Persistent HTTP
                                    (Or)
    (b) Explain the components of DNS

PART - C (3 X 10 = 30)
Answer any THREE Questions

16. Explain the OSI Network architecture specifying the functions of each layer.

17. Explain adaptive flow control in detail and its uses.

18. Write the Sliding Window Algorithm and explain it in detail.

19. Discuss any TWO Routing algorithms.

20. Explain SMTP in detail.