18023

B.C.A. Examination, Dec.-2024

Computer Networks

(BCA-503)

Time : Three Hours] *[Maximum Marks : 75*

Note : Attempt questions from **all** sections as per instructions.

Section-A

(Very Short Answer Type Questions)

Note : Attempt **all** questions. 3×5=15

1. What is the need of Computer Network? 3

2. Define HDLC. 3

3. Explain the concept of Pigybacking. 3

P.T.O.

4. Compare datagram approach & virtual circuit approach. 3

5. Describe how SMTP protocol is used in E-Mail applications. 3

Section-B

(Short Answer Type Questions)

Note : Attempt any **two** questions. 7.5×2=15

6. Discuss the functions of transport, Presentation & Application layer. 7.5

7. Explain the switching methods in Computer Network. 7.5

8. Explain in brief. 7.5

   (a) Guided media

   (b) Transmission mode

Section-C

(Long Answer Type Questions)

Note : Attempt any **three** questions.

15×3=45

9. What are the layers of the ISO/OSI protocol stack? Briefly list out their functions. 15

10. Explain in detail about the error & Flow control mechanisms employed at data link layer. 15

11. (a) Explain the Shanon capacity with Examples. 7

    (b) What is CSMA? List the protocols used with CSMA. 8

12. (a) Explain ISDN Architecture and its Services. 5

    (b) Describe the congestion control Algorithms. 10

13. Describe any **three** : 15

    (a) Line configuration

    (b) Modems

    (c) Internet working

    (d) SSL

    (e) Distortion vs Noise

D

(21223) (Printed Pages 4)

BCA-V Sem. Roll No. .....

18023

B.C.A. Examination, Dec.-2023

Computer Networks

(BCA-503)

Time : Three Hours] *[Maximum Marks : 75*

Note : Attempt questions from **all** sections as per instructions.

Section-A

(Very Short Answer Type Questions)

Note : Attempt **all** questions. Each question carries **3** marks. Very short answer is required not exceeding 75 words.

1. What do you under stand by distributed processing? 3

2. Explain the use of Bridges. 3
3. Write a short note on e-mail. 3
4. Explain various network categories based on size of network. 3
5. Compare Byte-oriented versus bit-oriented protocols. 3

Section-B

(Short Answer Type Questions)

Note : Attempt any **two** questions out of the following three questions. Each question carries 7.5 marks. Short answer is required not exceeding 200 words.

6. What are the approaches used to provide a range of Quality of service (QoS)? 7.5
7. Brief about the importance of simple Network management Protocol (SNMP). 7.5

8. Describe the function & responsibilities of session layer. 7.5

Section-C

(Long Answer Type Questions)

Note : Attempt any **three** questions out of the following five questions. Each question carries 15 marks. Answer is required in detail.

9. Outline the steps involved in building a computer network. Give the detailed description for each step. 15

10. Analyse various error detection techniques in trans mission of data. 15

11. What is Topology? Describe various types of topology in computer Network with example. Also give the advantages & disadvantages of each. 15

12. What is congestion control. How congestion control is different from flow control. Explain various congestion control techniques in computer network. 15

13. Write short notes on any **three** : 15

    (a) ISDN

    (b) Routers

    (c) Connection management

    (d) TDM & FDM

    (e) DTE-DCE Interface

A (Printed Pages 3)

(20222) Roll No. .....

BCA-V Sem.

18023 (CV-III)

B.C.A. Examination, Dec.-2021

COMPUTER NETWORKS

(BCA-503)

Time : 1½ Hours] *[Maximum Marks :75*

Note : Attempt **all** the sections as per instructions.

Section-A

Note : Attempt any **two** questions. Each question carries **7.5** marks. 2×7.5=15

1. What is UDP?
2. What is DTE-DCE interface?
3. Write a short note on computer network.
4. Differentiate between TDM and FDM.
5. What do you mean by congestion?

P.T.O.

Section-B

Note : Attempt any **one** question out of the following **three** questions. Each question carries **15** marks. 1×15=15

6. Discuss ISDN, its services & layers.
7. What do you mean by guided & unguided media? Explain with example.
8. Draw a neat diagram of OSI model and explain the functioning of each layer.

Section-C

Note : Attempt any **two** questions out of the following **five** questions. Each question carries **22.5** marks. 2×22.5=45

9. What do you understand by routing? Explain any routing protocal in detail. Differentiate between static and dynamic routing.

10. Write short notes on:

    (a) Throughput & Wavelength

    (b) Synchronous protocols

    (c) Routers

11. Explain TCP packet format in detail.

12. Give a brief description of session layer and explain the functions of session layer.

13. Write short notes on:

    (a) Network topology

    (b) LCP

    (c) Error control

D (Printed Pages 4)

(20221) Roll No. .....

BCA.-V Sem.

18023

B.C.A. Examination, Dec.-2020

Computer Networks

(BCA-503)

Time : Three Hours] *[Maximum Marks : 75*

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Note : Answer all the **five** questions. Each question carries **3** marks. Very short answer is required. 3×5=15

1. Enlist the components of data communication.
2. Explain attenuation in a signal.

3. Four channels, each with a 100-KHz band width, are to be multiplexed together, what is the minimum bandwidth of the link if there is a need for a guard band of 10 KHz between the channels to prevent interference?
4. Differentiate gateways & routers.
5. What is connection-less service provided by the transport layer?

Section-B

(Short Answer Questions)

Note : Attempt any **two** questions out of the following **three** questions. Each question carries **7½** marks. Short answer is required. 7½×2=15

6. Explain any **one** of the following:-
   (a) Ring & star topology.
   (b) Transmission modes.

7. Discuss point-to-point protocol (PPP).

8. Explain the functions of presentation layer.

Section-C

(Detailed Answer Questions)

Note : Attempt any **three** questions out of the following **five** questions. Each question carries **15** marks. Answer is required in detail. 15×3=45

9. Explain the distance vector routing algorithm with an example.

10. Discuss the different guided medias with the uses.

11. How circuit switching works in a network, explain in detail.

12. Discuss different protocols at application layers.

13. How DTE-DCE interface works? Also discuss the essence of modems. 10+5

A

Printed Pages : 3

(21119)

Roll No. .....

B.C.A.-V Sem.

18023

B.C.A. Examination, November-2019

COMPUTER NETWORKS

(BCA-503)

Time : Three Hours] *[Maximum Marks : 75*

Note : Attempt questions from ***all*** sections as per instructions.

Section–A

(Very Short Answer Questions)

Note : Attempt all the ***five*** questions. Each question carries 3 marks. Very short answer is required not exceeding 75 words. 5×3=15

1. Which is the best topology for a local area network in a building ? Justify your answer.

2. The power of a signal is 100 mW and the power of the noise is 10μW; what are the values of SNR and SNR_{dB} ?

3. How frequency division multiplexing works ?

4. Differentiate Bridges and Repeaters.

5. What are the services of transport layer ?

Section–B

(Short Answer Questions)

Note : Answer any ***two*** questions out of the following three questions. Each question carries 7½ marks. Short answer is required not exceeding 200 words.

2×7½=15

6. Explain any *one* of the following :

(a) Transmission modes

(b) LAN and MAN

7. How flow control and error control is done at data link layer ?

8. Explain the functions of session layer.

Section–C

(Detailed Answer Questions)

Note : Attempt any ***three*** questions out of the following five questions. Each question carries 15 marks. Answer is required in detail. 3×15=45

9. Explain the Link state routing algorithm with an example.

10. Discuss the different unguided media with the uses.

11. How packet switching works in a network ? Explain in detail.

12. Discuss different protocols at application layer.

13. What is the essence of Modems ? How DTE-DCE interface works.

G
(21218) Roll No. .....
BCA- V Sem.

18023

B. C. A. Examination, Dec. 2018

Computer Networks

(BCA-503)

(New)

Time : Three Hours] *[Maximum Marks : 75*

Note : Attempt questions from all Sections as per instructions.

Section-A

(Very Short Answer Questions)

Answer all the *five* questions. Each question carries 3 marks. Very short answer is required. 3×5=15

1. Explain how quality of service is provided through integrated services.

2. What is the difference between circuit switching and packet switching ?

3. Explain in detail about the steps involved in the routing process of a packet network.

4. What do you understand by Gateway ?

5. Explain ethenet protocol.

Section-B

(Short Answer Questions)

Answer any *two* questions out of the following three questions. Each question carries 7½ marks. Short answer is required. 7½×2=15

6. Explain error detection and error correction code.

7. Explain any one of the following :
   (a) NCP
   (b) PPP layers.

8. What is the difference between TCP and OSI model ?

Section-C

(Detailed Answer Questions)

Answer any *three* questions out of the following five questions. Each question carries 15 marks. Answer is required in detail. 15×3=45

9. Explain the connection management of transmission control protocol.

10. Explain the functions of session presentation and application layer.

11. Explain the design issues of network layer.

12. What is Congestion Control Algo ? Explain with example.

13. Explain any one of the protocols used for flow control in noisy channel fibre distributed data interface operation.

N (Printed Pages 7)

(201217) Roll No.....

B.C.A. - V Sem.

18023

B.C.A. Examination, Dec. 2017

Computer Network

(BCA-503)

(New Course)

Time : Three Hours] *[Maximum Marks : 75*

Note : Attempt questions from **all** sections as per instructions.

Section-A

(Very Short Answer Questions)

Note : Attempt all the **five** questions. Each question carries **3** marks. Select the correct option from the given multiple choices for the following questions. $3 \times 5 = 15$

P.T.O.

1. Repeater operates in which layer of OSI model? 3

   (a) Application layer

   (b) Presentation layer

   (c) Physical layer

   (d) Transport layer

2. A networking device that forwards data packets along networks and acts as a central point of network is called- 3

   (a) Repeater

   (b) Router

   (c) Bridge

   (d) Hub

3. Multiplexing technique that shifts each signal to a different carrier frequency. 3

   (a) FDM

(b) TDM

(c) Either a or b

(d) Both a and b

4. A local telephone network is an example of a _____ network. 3

(a) Packet switched

(b) Circuit switched

(c) Both of the mentioned

(d) None of the mentioned

5. Which one of the following task is not done by data link layer? 3

(a) Framing

(b) error control

(c) flow control

(d) Channel coding