

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. $3 \times 5 = 15$

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

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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. $7\frac{1}{2} \times 2 = 15$

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

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7. Discuss point-to-point protocol (PPP).
8. Explain the functions of presentation layer.

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

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. $15 \times 3 = 45$

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

10. Discuss the different guided medias with the uses.

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

12. Discuss different protocols at application layers.

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Section-B

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

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. $2 \times 22.5 = 45$

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?

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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

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

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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 transmission 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. 15

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

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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. $3 \times 5 = 15$

1. What is the need of Computer Network? 3
2. Define HDLC. 3
3. Explain the concept of Piggybacking. 3

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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.

$7.5 \times 2 = 15$

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.
 - (a) Guided media
 - (b) Transmission mode

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Section-C

(Long Answer Type Questions)

Note : Attempt any **three** questions.

$$15 \times 3 = 45$$

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. <https://www.ccsustudy.com> 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

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