BCA Semester-IV (Hons.) Examination, 2022-23
BACHELOR OF COMPUTER APPLICATION

Course ID : 43311 **Course Code : CC-08**

Course Title : Computer Network

Time : 2 Hours Full Marks : 50

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

GROUP–A

1. Choose the best alternative from the following options for each questions: 1×10=10

   i) What kind of transmission medium is most appropriate to carry data is a computer network that is exposed to electrical interferences?

      a) Unshielded twisted pair

      b) Optical field

      c) Coaxial Cable

      d) Microwave

      e) None of these

   ii) A collection of hyperlinked documents on the internet forms—

      a) World wide web (www)

      b) E-mail system

      c) Hypertext markup language

      d) Hyper text language

      e) None of these

   iii) CRC stands for

      a) Code Repeat Check

      b) Cyclic Repeat check

      c) Cyclic Redundancy check

      d) Code Redundancy check

      e) None of these

   iv) Computer Network is—

      a) Collection of hardware components and computer

      b) Interconnected by communication channels

      c) Sharing of resources and information

      d) All the above

      e) None of these

v) How many layers does ISO-OSI models has

    a)   4

    b)   5

    c)   6

    d)   7

    e)   None of these

vi) Identify the layers which provides services to the user

    a)   Session Layer

    b)   Application layer

    c)   Presentation Layer

    d)   Physical Layer

    e)   None of these

vii) Identify the full form of HTTP?

    a)   Hyper Text Markup Language

    b)   Hyper Text Transfer Protocol

    c)   Hyper Text Transfer Package

    d)   Hyper Text Transfer Practice

    e)   None of these

viii) What is the length of the IPV4 address?

    a)   8 bits

    b)   16 bits

    c)   32 bits

    d)   128 bits

    e)   None of these

ix) Select the bits from the class A address

    a)   110

    b)   10

    c)   1111

    d)   0

    e)   None of these

x) Select the size of Network bits and host bits of class A of IP address.

    a)   Network bits 7, Host bits 24

    b)   Network bits 8, Host bits 24

    c)   Network bits 7, Host bits 23

    d)   Network bits 8, Host bits 23

    e)   None of these

GROUP–B

2. Answer any **five** questions: 2×5=10

i) Write the disadvantage of mesh topology.

ii) What is total vulnerable time of Pure ALOHA?

iii) Write down the difference between polar and bipolar schema.

iv) What do you mean by piggybacking?

v) Consider a noiseless channel with bandwidth of 3000Hz transmitting a signal with two signal level. The maximum bit rate is?

vi) What is throughput?

vii) Define token ring in computer Network.

viii) What is the propagation time if the distance between the two points is 12000 km, assume the propagation speed to be $2.4×108$ m/s in cable?

GROUP–C

3. Answer any **four** questions: 5×4=20

i) Distinguish between TCP and UDP.

ii) Write down the different type of transmission mode in networking.

iii) Write short note on CSMA with collision avoidance.

iv) Distinguish between IPV4 AND IPV6.

v) What is asymmetric key cryptography? Explain with Diagram.   1+4

vi) Write short notes on: $2\frac{1}{2}+2\frac{1}{2}$

     a) Congestion Control

     b) Routing

GROUP–D

4. Answer any **one** question: 10×1=10

i) Explain the conversion of analog to digital. Difference between stop and wait protocol and sliding window protocols. What is the efficiency of selective repeat?   5+3+2

ii) What is switching? Distinguish between circuit, message, and packet switching technique in computer network. Define virtual circuit in computer network.   1+6+3

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