Third Semester B.C.A.Degree Examination, March/April 2023
(CBCS NEP SCHEME)
(NBC 0230) Computer Communication and Networks

Time : 2 Hours   Max. Marks : 60

Instructions to students:
1. **The students should legibly write section number along with question numbers.**
2. **The answers without section number and question numbers will not be valued.**
3. **The question numbers should be legibly written within the margin only.**

SECTION - I

I. **Select the most appropriate answer from the options provided.**   (10x1=10)

I-1. Following are the Applications of Computer Networks:
   a)   E-Commerce   b) CAD   c) Email   d) Both a and c

I-2. The abbreviation of MAN is:
   a)   Metropolitan Area Network   b)   Media Access Network
   c)   Medium Access Network   d)   None of the above

I-3. One of the important reference model followed in Computer Networks is:
   a)   TCP   b) OSI   c) UDP   d) None of the above

I-4. Which is the Guided Transmission media in the following?
   a) Twisted Pair   b) Radio Waves   c) Infrared   d) Both a and b

I-5. End to End path must be established before communication in:
   a) Circuit Switching b) Packet Switching c) Both a and b   d) None of the above

I-6. CRC stands for:
   a)   Cyclic Redundancy Check   b)   Cyclic Revision code
   c)   Cyclic Redundancy Code   d)   None of the above

I-7. Hamming code is an example for
   a)   Error Detection   b)   Connection Establishment
   c)   Connection Release   d)   None of the above

I-8. Data link Layer Protocol is:
   a)   TCP   b)   Stop-and-Wait c)   UDP   d) IP

I-9. The process of path selection and packet forwarding in the Network is termed as:
   a)   Routing   b)   Connection Establishment
   c)   Decision making   d)   None of the above

I-10. The Transmission Layer protocols are:
   a)   TCP and UDP   b)   Stop-and-Wait and UDP
   c)   Simplex protocol and TCP   d)   Simplex and UDP

SECTION - II

II. **Answer/Write a short note on any FIVE of the following:** (5x3=15)

II-1. Write a note on Applications of Computer Networks.

II-2. Explain MAN in brief.

II-3. Write a note on Twisted pair cable.

II-4. What is a Packet Switching? Explain.

II-5. Explain Hamming code.

II-6. Mention 3 Routing algorithms.

II-7. Write any 3 differences between TCP and UDP.

II-8. List the services provided by Transport Layer?

SECTION - III

III. **Answer any THREE questions from the following:** (3x5=15)

III-1. Explain LAN with a neat diagram.

III-2. Explain briefly the TCP/IP model with a neat diagram.

III-3. Explain Stop-and-Wait protocol.

III-4. Explain the general principles of Congestion Control.

III-5. Write the neat diagram of TCP header and briefly explain

SECTION - IV

IV. Answer the following: (2x10=20)

IV-1. a) Explain OSI reference model in detail.

OR

b) Explain Radio Waves and Microwave Transmission in detail.

IV-2. a) Explain Distance Vector Routing Algorithm.

OR

b) Explain the architecture of Email and World Wide Web.

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