

**BCA [Honours]**

**[CBCS]**

**B.Sc. Third Semester End Examination-2023**

**(Regular & Supplementary Paper)**

**PAPER-C7T**

**Computer Networks**

***Full Marks: 40***

***Time: 02 Hrs***

*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) Answer any FIVE questions of the following: 5x2= 10**

- i) Explain different transmission modes available, mention the applications also.
- ii) Compare between OSI and TCP, IP model.
- iii) What is the advantage of IPV6 over IPV4?
- iv) Explain briefly about Pulse code modulation (PCM) technique.
- v) What do you mean by firewall?
- vi) Define bandwidth.
- vii) List out all responsibilities of physical layer.
- viii) Define DNS.

(2)

**Group B**

**Answer any FOUR questions of the following: 4x5 = 20**

- 2) What do you mean by connection-less and connection-oriented protocol?
- 3) A network on the internet has a subnet mask of 255.255.240.0. What is the maximum number of hosts it can handle?
- 4) Explain unicast, multicast, broadcast network and point to point network. 5
- 5) Compare the between CSMA and CSMA/CD. Explain the ALOHA algorithm. 5
- 6) Explain stop and wait- ARQ protocol and why it is called ARQ. 2+2
- 7) How many parity bits are needed for data bits 1011 (using hamming code technique) and find the hamming code and if 7<sup>th</sup> bit of hamming code got corrupted. How will it be identified using hamming code?

**Group C**

**Answer any ONE question of the following: 1x10 = 10**

- 8) Draw the signal pulse for 1010110 using Manchester and differential Manchester encoding and explain briefly? What are the different task performed by transport layer? What do you mean by Ethernet? What is the IEEE code for Ethernet? Explain domain name system. 3+2+1+1+3

(3)

- 9) Define protocol in context of data communication. Explain the layers in details of OSI model. 2+8

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