

Computer Science [Honours]

[CBCS]

B.Sc. Third Semester End Examination-2023

(Regular & Supplementary Paper)

PAPER-C7T

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**
- a) What is farming? Explain different types of framing.
 - b) What is the purpose Stuffing? What is the different types of stuffing.
 - c) Compare between RZ and NRZ Digital signal with suitable example.
 - d) Explain briefly about Pulse code modulation (PCM) technique.
 - e) Differentiate between Synchronous and asynchronous transmission.
 - f) Define Frequency Modulation.
 - g) What is Proxy Service?
 - h) What is Redundancy check?

(2)

Group B

Answer any FOUR questions of the following: $4 \times 5 = 20$

- 2) What is multiple access protocol? Explain different variant of CSMA protocol (1 persistent, non persistent, p-persistent)
- 3) What is firewall why are these used? What is classless addressing?
- 4) IP address 142.10.0.1 resides in which class? What is the maximum number of device can be added in this network and what is the default subnet mask of this IP address?
- 5) How many parity bits are need for data bits 1101 (using hamming code technique) and find the hamming code and if 7th bit of hamming code got corrupted how will it be identified using hamming code?
- 6) Given a 10 bit sequence 1010011110 and a divisor 1011, find CRC.
- 7) Discuss differential Manchester Encoding system.

Group C

Answer any ONE question of the following: $1 \times 10 = 10$

- 8) What do you mean by flow control? Explain different scenarios of Stop-and-wait Protocol. What is burst error? Explain the basic approach of error detection technique. $2+3+2+3$
- 9) a) Discuss TCP/IP protocol suit. B) Discuss phase modulation system and give its utility.