UG 5th Semester Examination 2021

COMPUTER SCIENCE (Honours)

Paper Code : DC-11

Data Communication and Networking

[CBCS]

Full Marks: 32 Time: Two Hours

The figures in the margins indicate full marks.

Group - A

1. Answer any six questions: 2×6=12

(a) What is ARP?
(b) Write the name of protocols available in transport layer of TCP/IP model.
(c) What is Bandwidth?
(d) Write the functions of the session layer in OSI model.
(e) Find the netid of the following address: 112. 53.34.24/4.
(f) What is attenuation?
(g) Find the maximum data rate of a noiseless channel with a bandwidth of 2000 Hz transmitting a signal with eight signal levels.

Group – B

Answer any two questions 10×2=20

2. (a) Explain FDM with an example.
(b) Draw the digital signal corresponding to the following digital data using Manchester and Differential Manchester schemes.

10010111

(c) Differentiate between analog signal and digital signal. 4+4+2=10

3. (a) Find the Hamming code for the following data:

$(1100110)_2$

(b) Explain the functionalities of SMTP.
(c) Differentiate between guided media and unguided media. 4+3+3=10

4. (a) Explain FM modulation technique.

(b) Explain Cyclic Redundancy Check with an example.

(c) What is DHCP? 4+4+2=10