

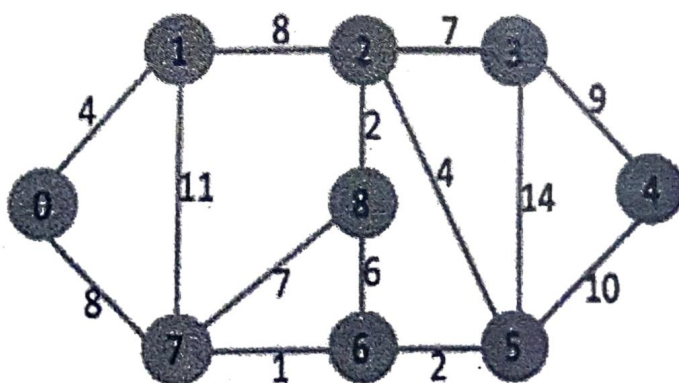
Cluster Innovation Centre, University of Delhi, Delhi-110007

Examination : End Semester Examination – May 2023
Name of the Course : B.Tech (Information Technology and Mathematical Innovations)
Name of the Paper : Information Exchange in Computing Devices: Data Communication & Networking
Paper Code : 32861403
Semester : IV
Duration : 2 Hours
Maximum Marks : 50

Instructions:

This question paper contains seven questions, out of which any five are to be attempted. Each question carries equal marks.

1. Describe each header item of IP protocol in the Network layer. [10]
2. What is multiplexing? What are their types? Explain each type with its advantages and disadvantages. [10]
3. Apply in a stepwise fashion, the shortest path algorithm for the following network. The source vertex is 0 and the destination vertex is 4. [10]



4. Explain Socket programming? How to use it for data transmission? [10]
5. Demonstrate the implementation of Hamming Code to correct errors in the following message code 111101111100. [10]
6. Describe the OSI model with each layer and associated functions. [10]
7. Describe the SMTP functionality. Explain its implementation in different settings of users. [10]