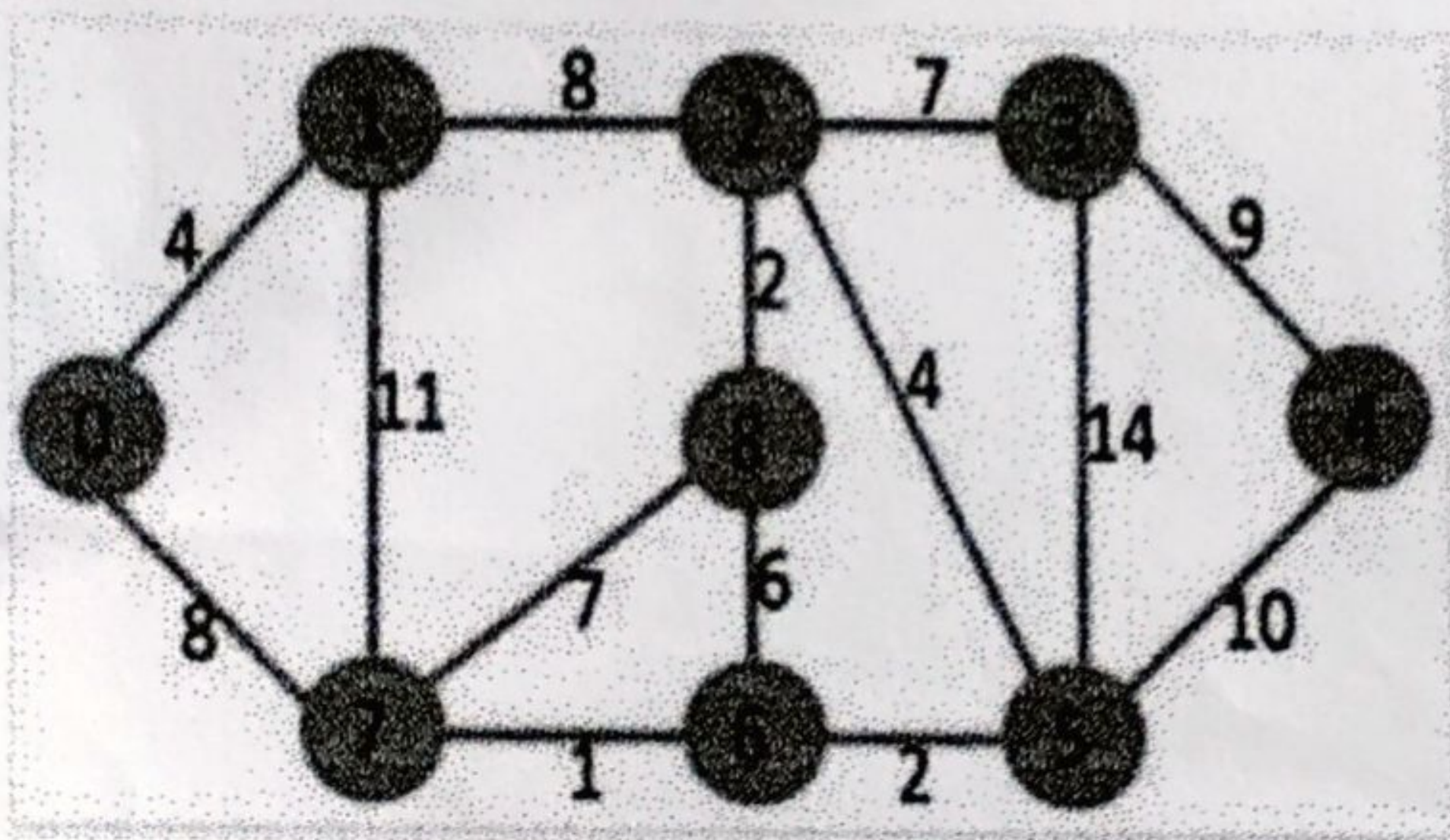## Cluster Innovation Centre, University of Delhi, Delhi-110007

Examination : End Semester Examination – May 2022

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 & 30 minutes

Maximum Marks : 50

Instructions:

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

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1. Describe each header item of TCP protocol in the transport layer.

2. What is multiplexing? What are their types? Explain each type with its advantages and disadvantages.

3. Apply in a stepwise fashion, the shortest path algorithm for the following network. Source vertex is 0 and destination vertex is 4.

4. Explain Berkeley Socket Interface(BCI)? How to use it for data transmission?

5. Demonstrate the implementation of Hamming Code to correct errors in the following message code 11110101101.

6. Describe OSI model with each layer and associated functions.