## M. SC. (MATHEMATICS WITH APPLICATIONS IN COMPUTER SCIENCE) [M. Sc. (MACS)]

## Term-End Practical Examination December, 2024

MMTE-001(P)(Set-II): GRAPH THEORY

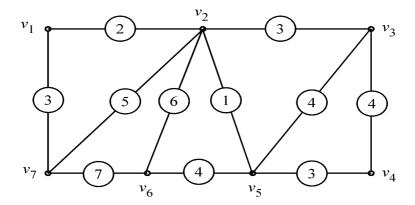
Time:  $1\frac{1}{2}$  Hours Maximum Marks: 40

Note: (i) There are two questions in this paper, totalling 30 marks. Answer both questions.

- (ii) Remaining 10 marks are for viva-voce.
- (iii) All the programs are to be written in C language.
- 1. Write a program that implements Kruskal's algorithm to find a minimum weight spanning

tree in a connected weighted graph. Run your program on the following graph:

15



2. Write a program to check whether a given graph is connected or not.