

[6662]-203

F.Y.B.Sc. (Computer Science)

MATHEMATICS

MTC - 151 - T : Graph Theory  
(Revised 2024 Pattern) (Semester - II)

Time : 2 Hours]

[Max. Marks : 30

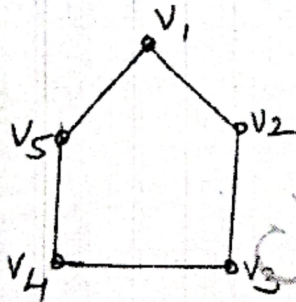
Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Use of single memory non - programmable scientific calculator is allowed.

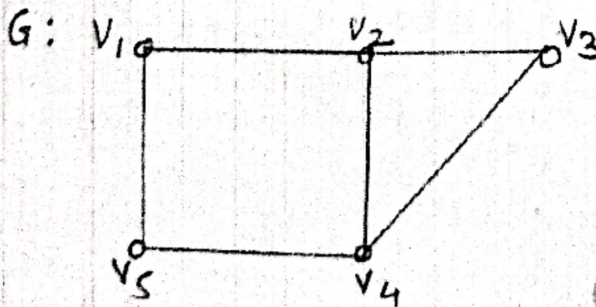
Q1) Attempt any five of the following.

[10]

- a) Find the number of edges in  $K_{5,4}$  graph.
- b) Define regular graph. Also draw one example of a 3-regular graph on 6 vertices.
- c) Draw the complement of graph G given below.



- d) If T is a spanning tree of  $K_5$ , how many bridges will T contains.
- e) Define path of a graph with proper example.
- f) Find vertex connectivity of graph G.



- g) Show that there does not exist a party of  $g$  person such that each knows 5 other person.

