

Subject: -Graph Theory
Date: 24-03-2026

Marks-20

Q.1) Multiple choice Questions

3M

1) The simple Graph number of vertices is-----

- a) 1 b) 2 c) n d) c

2) The wheel Graph number of vertices is-----

- a) 1 b) 2 c) n d) n+1

3) The Handshaking Lemma is $\sum d(v_i) =$ -----

- a) 2m b) m c) 2 d)

Q.2)) True and False

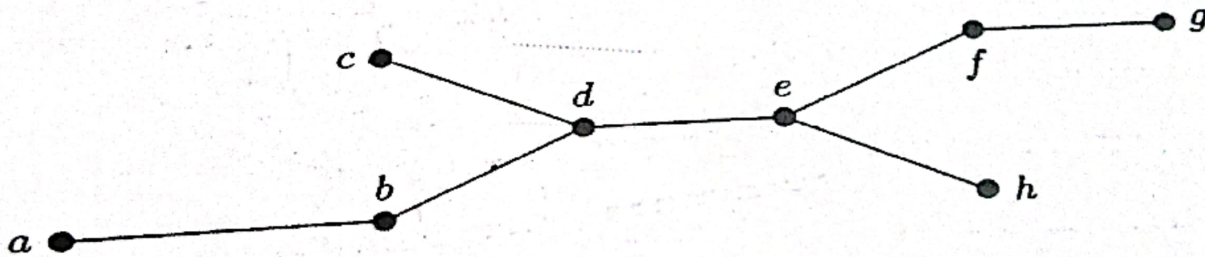
2M

- a) C_n has n vertices and n edges
b) W_n has n+1 vertices and n edges

Q. 2) Attempt any three of the following:

15M

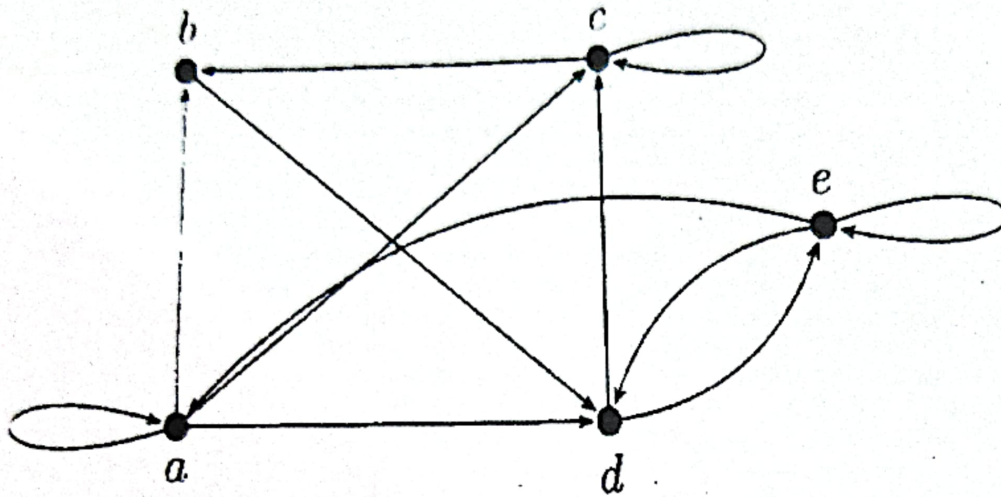
1) Find centre and radius of the following tree



2) Give an example of a graph which had

- i) Euler circuit but not Hamilton circuit.
ii) Euler circuit as well as Hamilton circuit.]

3) Find the in-degree and out-degree of each vertex in the digraph G with directed edges shown in following figure



4) Find the Euler circuit in the following graph using Fleury's algorithm.

