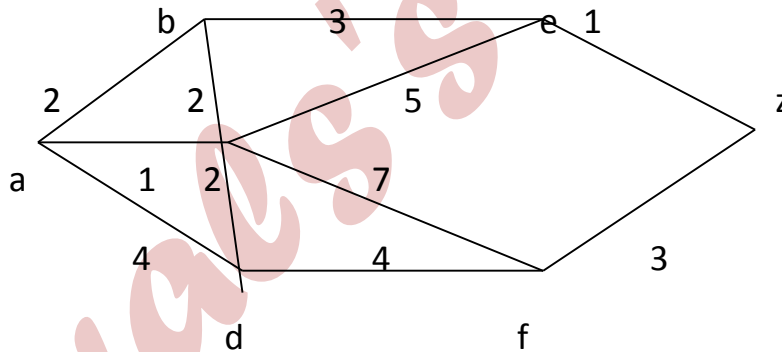


TEST SERIES -1
CLASS B.A-3/B.SC-3
DISCRETE

1. State and prove two properties of Lattices. (7)
2. Define a simple graph, a multigraph ,a complete graph and a weighted graph with the help of an example. (7)
3. Show that the maximum number of edges in a simple graph with n vertices is $\frac{n(n-1)}{2}$. (7)
4. Find the shortest path between a and z. (7)



5. A graph G is connected iff it has a spanning tree. (7)
6. Write regular expression for language $L = \{ a^i b^j : i+j \text{ is even} \}$ (7)
7. Define a Language , Grammer (2)
8. Define an atom and an antiatom in lattice theory. (2)
9. Explain the concept of isomorphism of graphs. (2)
10. Define a tree. State it's any two prop. (2)