Roll No.

BCA-5
1st Year Examination, Calendar Batch 2017
Discrete Mathematics

Time : 3 Hours]   *[Max. Marks : 100*

Note. *Attempt any five questions. Each questions carry equal marks.*

Q.1. Linear sum W1+ W2 of two subspaces W1and W2 of a vector spaceV(F) is A subspace of V(F).

Q.2. Prove that in any graph .There are an every number of Vertices of odd degree .

Q.3. Draw the directed graph G Whose incidence matrix M_1 is Show in fig.

Q.4. Show that inverse of an element a in a group G is unique.

Q.5. Prove that G = {1,2,3,4,5,6} is a finite abelian group of order 6 under multiplication and addition modulo 7.

Q.6. Explain the application of graph.

Q.7. Consider the set M of all 2×2 matrices of the type [a/(-b)   b/(-a)] where a',b' are the conjugates of a and b. Is M a field?

Q.8. Write short notes on: [any four]
(a) walk   (b) Plannar graph   (c) Rooted tree   (d) Digraph
(e) Spanning tree.