

**P. S. SCIENCE & H. D. PATEL ARTS COLLEGE, KADI**

**Internal Examination**

**B. Sc. Semester - VI**

**16-3-2017]**

**Mathematics - 604 (A)**

**[1-30 to 3-30**

---

1. (a) Defines : complete graph, walk, connected graph.  
(b) **Attempt any one.**
    - (i) Define path with illustration.
    - (ii) Define circuit with illustration
  
  2. (a) Defines : cut set, planer graph, vertex connectivity.  
(b) **Attempt any one.**
    - (i) Explain Detection of planarity.
    - (ii) Prove that  $K_5$  is a non-planar graph.
  
  3. (a) Defines : Incidence Matrix with illustration.  
(b) **Attempt any one.**
    - (i) Explain properties of path matrix.
    - (ii) Explain in brief Acyclic digraphs.
-