MAU22C00: TUTORIAL 10 PROBLEMS
GRAPH THEORY

1) Let (V, E) be the graph with vertices a, b, c, d, and e and edges ab, bd, be, ac, cd, and ae.

(a) Draw this graph. Write down its incidence table and its incidence matrix.
(b) Write down this graph's adjacency table and its adjacency matrix.
(c) Is this graph complete? Justify your answer.
(d) Is this graph bipartite? Justify your answer.
(e) Is this graph regular? Justify your answer.
(f) Does this graph have any regular subgraph? Justify your answer.
(g) Give an example of an isomorphism from the graph (V, E) specified at the beginning of this problem to the graph (V', E') with vertices p, q, r, s, and t, and edges pq, ps, rt, st, rs, and rq.