

MAU22C00: TUTORIAL 11 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 .