GRAPH THEORY AND APPLICATIONS MAS210
KEY OBJECTIVES

To obtain a bare pass in the exam you should be able to describe and implement the following algorithms.

- Algorithms to find the components of a graph and the strongly connected components of a digraph.
- Algorithms to construct breadth first search and depth first search spanning trees of a connected graph.
- The algorithms of Prim and Kruskal to find a minimum weight spanning tree in a connected graph.
- Dijkstra's algorithm to find a shortest path spanning tree in a graph or digraph.
- Moravék's algorithm to find a longest path spanning tree in an acyclic directed network.
- The max flow/min cut algorithm for finding a maximum (s, t)-flow in a network.
- Algorithms for finding a maximum matching and a maximum weight matching in a bipartite graph.
- Algorithms for finding an Euler trail in a graph or digraph and for solving the Chinese Postman Problem.