

**AI Assignment 1 – Group Assignment (10 people Max per group).**

1. State and explain any five (5) classes of Agents [10]
2.
  - a) what is an intelligent agent [5]
  - b) What is the main difference(s) between simulated annealing and hill climbing? [10]
  - c) Briefly describe an expert system [5]

**AI Assignment 2 – Group Assignment (10 people Max per group).**

1.
  - a) Define heuristic [2]
  - b) What are the tradeoffs between forward chaining and backward chaining? [8]
2. For each of the following state which AI technique/s will be the most appropriate to solve the problem. Substantiate your choice in each case.
  - a) Develop a system to advice students on the choice of their undergraduate curriculum. Given a particular student's history, the system must advise the student on which courses to register for.
  - b) Develop a program that recognizes different species of flowers that are scanned in from. [5]  
photographs of the flowers. For each photograph the system must output the type of the flower, e.g. rose, azalea. [5]
  - c) Student modeler is an essential component of an intelligent tutoring system. The function of this component is to determine which topics, examples, and problems to present to a student based on the student's knowledge and responses to questions. [5]
  - d) Describe how ants are able to find the shortest path to a food source. [5]