Artificial Intelligence
Assignment # 01

Spring 2012

Marks: 20

Due Date

Your assignment must be uploaded before or on **20th April 2012.**

Uploading instructions:

Please view the **Assignment Submission Process** document provided to you by the Virtual University for uploading assignments.

- Assignment should be in .doc format.
- Save your assignment with your ID (e.g. bx020200786.doc).
- Assignment submission through email is highly discouraged.

Rules for Marking:

It should be clear that your assignment will not get any credit if:
- The assignment is submitted after due date.
- The submitted assignment file is corrupted.
- The assignment is copied.

Note:

Your answer must follow the below given specifications. You will be assigned zero marks if you do not follow these instructions.
- Font style: "Times New Roman"
- Font color: "Black"
- Font size: "12"
- **Bold** for heading only.
- Font in *Italic* is not allowed at all.
- No formatting or bullets are allowed to use.

Assignment:

Consider the search space below, where P is the start node and G and Y are goal nodes. Arcs are labeled with the value of a *cost function*; the number gives the cost of traversing the arc. Above each node is the value of a *heuristic function*; the number gives the estimate of the distance to the goal. Assume that uninformed search algorithms always choose the left branch first when there is a choice. Assume that the algorithms do *not* keep track of and recognize repeated states.

For each of the following search strategies,
(a) Indicate which goal state is reached first (if any) and
(b) List *in order,* all the states that are popped off the OPEN list.