SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

WINTER SEMESTER 2018
CONTINUOUS ASSESSMENT TEST – I

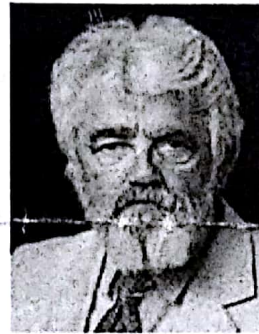|			
Programme	: B.Tech (Common to All)	Max.Marks	: 50
Course	: Artificial Intelligence	Time	: 90 min
Course Code	: CSE3013	Slot	: B1+TB1

Answer ALL Questions (5 * 10 = 50 Marks)

1. (a) Identify the following personalities and write about their contribution to Artificial Intelligence. [5]
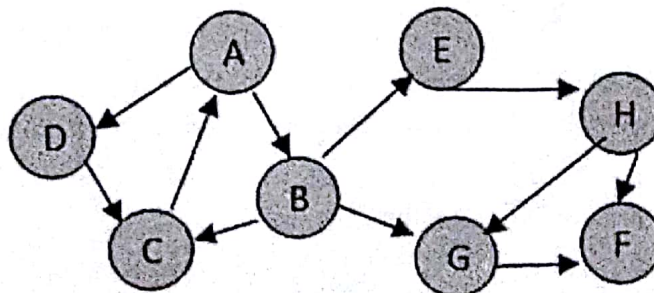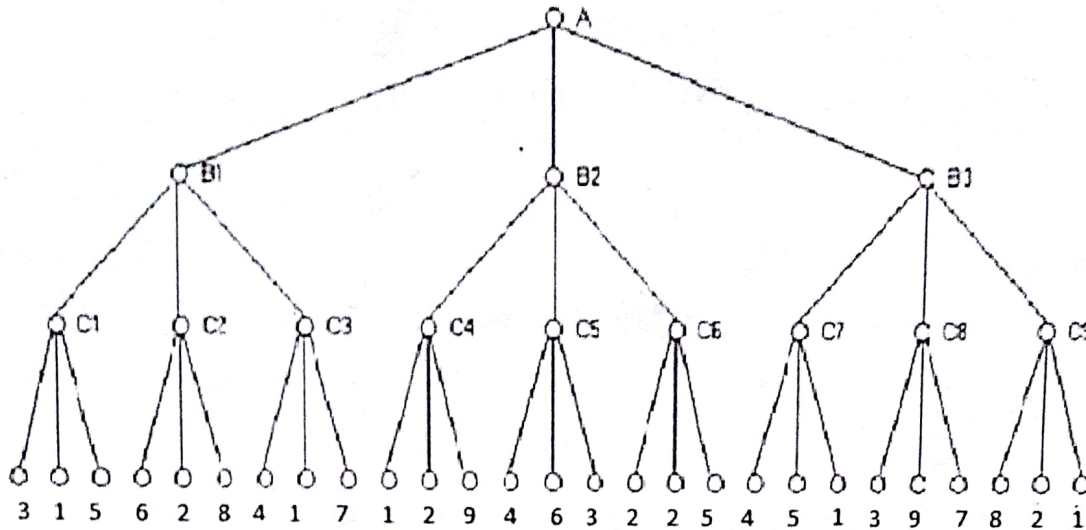
i)   ii)

b) Consider the following graph. If there is ever a decision between multiple neighbor nodes in the BFS or DFS algorithms, assume we always choose the letter closest to the beginning of the alphabet first. [5]
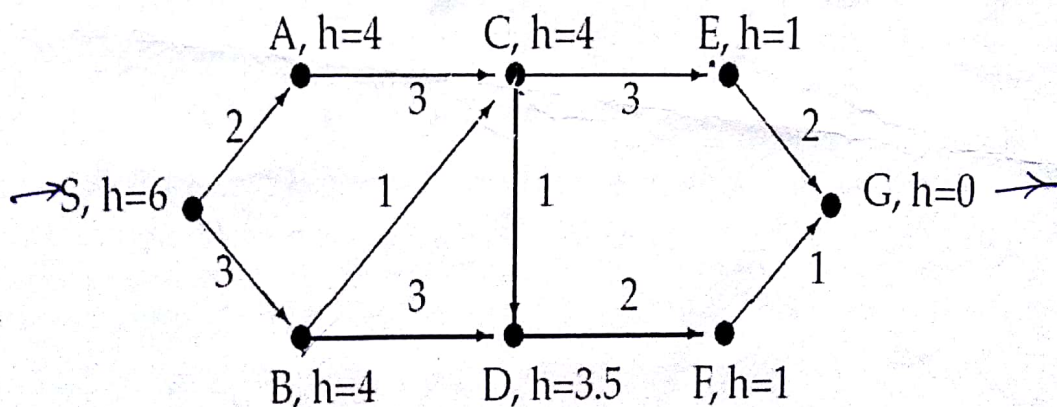

i)   In what order will the nodes be visited using a Breadth First Search?   DCABEGHF

ii) In what order will the nodes be visited using a Depth First Search?

2. Write pseudo code for Alpha – Beta Pruning. Apply both minimax algorithm and Alpha Beta pruning for the following graph. [3+2+5]

3. Explain the model and utility based agents with diagram [5+5]

4. Perform A* search algorithm and give the proof of optimality on the graph below to find the shortest path from node S to node G. Each node is labeled with a capital letter and the value of a heuristic function. Each edge is labeled by the cost to traverse that edge. [6+4]

5. Identify and Justify the environment properties for the following Agents. [5*2=10]

   a) Self-driving automobile
   b) Map-based journey planner
   c) Robotic vacuum cleaner
   d) Flight booking system
   e) Angry birds

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