COMSATS UNIVERSITY ISLAMABAD
DEPARTMENT OF COMPUTER SCIENCE
Mid Term Examination, Fall 2022

23

Class/Section: - BSAI – 3A
Subject: - Introduction to AI (AIC 262)
Instructor: - Dr. Muhammad Usman Yaseen

Marks: - 25
Time: - 90 minutes
Dated: - Nov 14, 2022

---CLO -1---

(5)

Q# 01: - Answer the following questions briefly.

i) How can you conduct Turing Test for an AI based chat bot?

ii) Why is having reliable data an important concern for developing an AI system?

iii) From the perspective of Medical Diagnostic Systems, why are ethics important in AI based MDS?

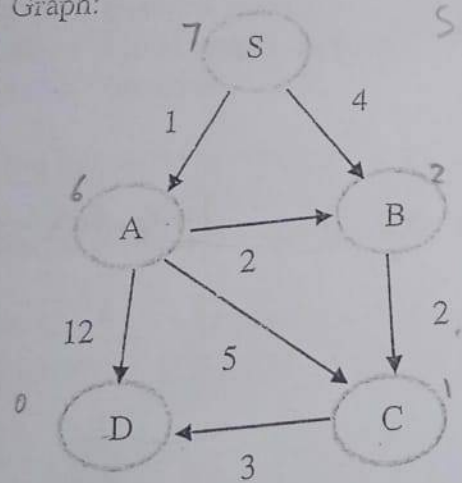
iv) How informed searches are better than uninformed searches? Give example

v) How high performance computing has contributed in terms of advancement in the field of AI?

---CLO 2---

Q# 02: - Consider the following graph along with the precomputed values for h(n), apply A* search on the given graph. NOTE: start state is S and goal state is D (5)

Graph:

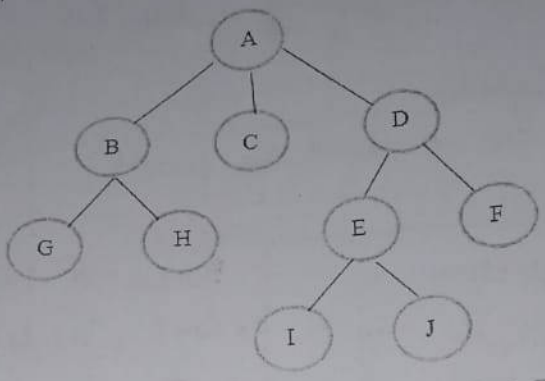


SABCD
1+2+2+3=8

State	h(n)
S	7
A	6
B	2
C	1
D	0

---CLO 2---

Q# 03: - Assume A and I as your start and goal states respectively. Perform BFS and DFS search strategies on the given graph and provide the output of both BFS and DFS: (5)



A → B → G → H → C → D → E → I

A → B → C → D → G → H → E → F → I

Output DFS: _____

Output BFS: _____

---CLO 3---

(5)

Q# 04: - Let's consider a propositional language where

- p means "Paola is happy",
- q means "Paola paints a picture",
- r means "Renzo is happy".

Formalize the following sentences:

Sentences	Formalization
f Paola is happy and paints a picture then Renzo isn't appy	
f Paola is happy, then she paints a picture	
Paola is happy only if she paints a picture	