

A) For each of the following terms on the left, write in the letter corresponding to the best answer or the correct definition on the right. The first one is done for you as an example.

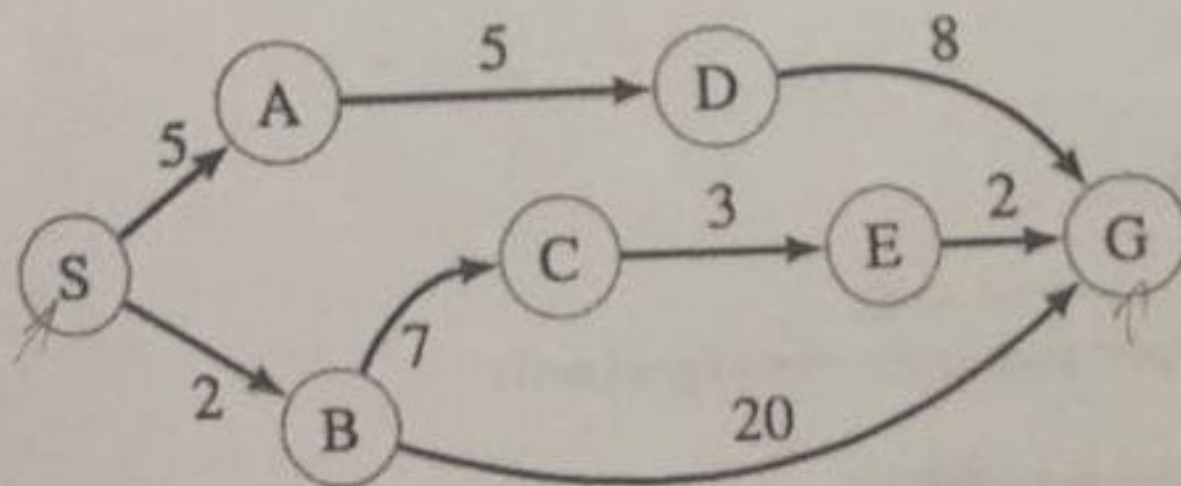
1.	C	Agent	A	Data structure constituting part of a search tree includes
2.	D	Abstraction	B	The model is how the human mind works
4.	E	State Space	C	Perceives environment by sensors, acts by actuators
5.	A	The Node	D	Process of removing detail from a representation
6.	B	Thinking humanly	E	All states reachable from the initial state by a sequence of actions

B) Choose the correct answer :

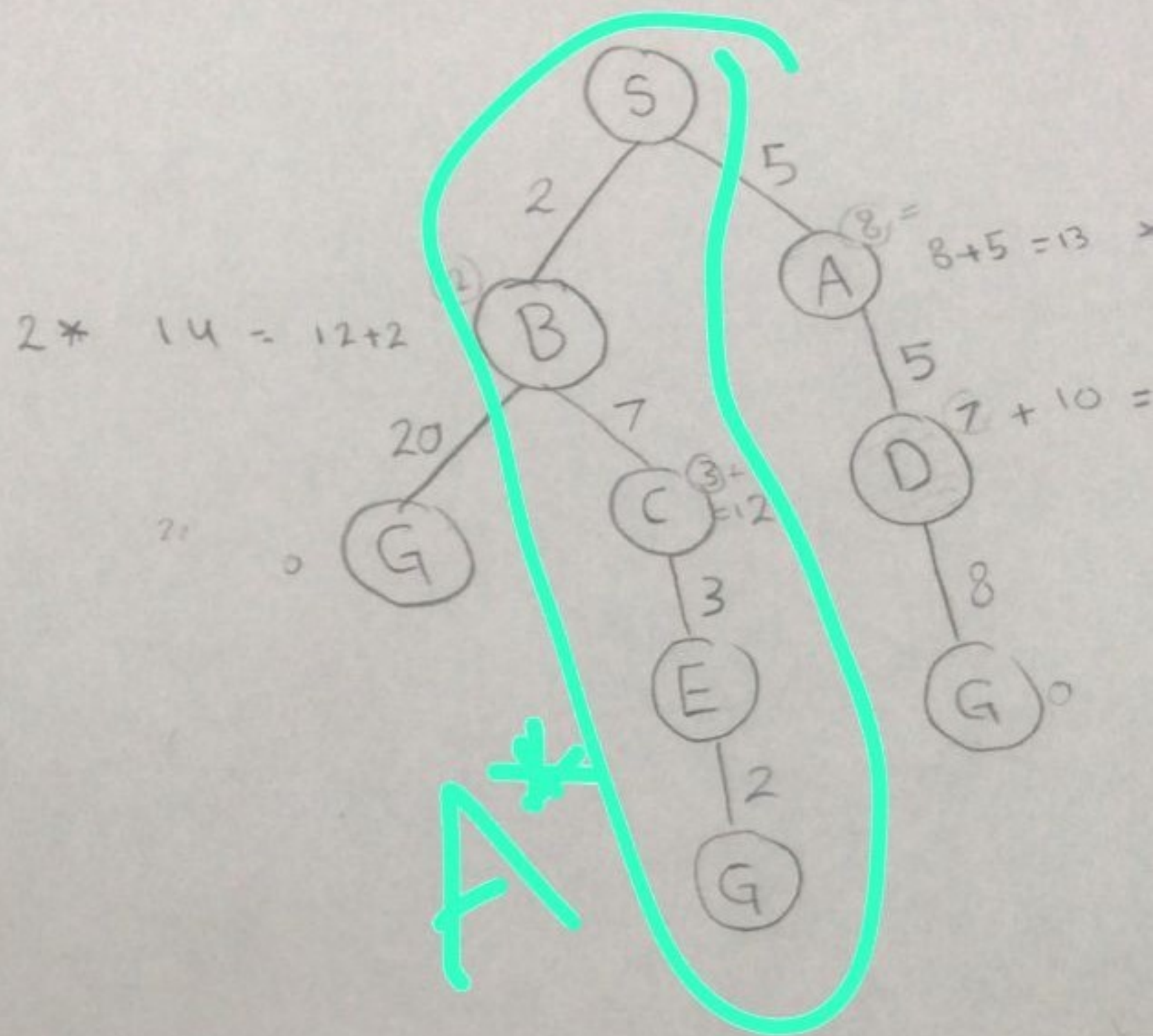
7. The model is the human being, the goal is to build a system that can pass as human.
 - ☒ a) Acting humanly
 - b) Thinking humanly
 - c) Thinking rationally
 - d) Acting rationally
8. Which search strategy is also called as blind search?
 - ☒ a) Uninformed search
 - b) Informed search
 - c) Simple reflex search
 - d) All of the mentioned
9. Heuristic function $h(n)$ is ____
 - a) Lowest path cost
 - b) Cheapest path from root to goal node
 - ☒ c) Estimated cost of cheapest path from root to goal node
 - d) Average path cost
10. When is breadth-first search is optimal?
 - a) When there is less number of nodes
 - ☒ b) When all step costs are equal
 - c) When all step costs are unequal
 - d) None of the mentioned

11. Best-First search is a type of informed search, which uses _____ to choose the best next node for expansion.
- ☒ Evaluation function returning lowest evaluation
 - ☐ Evaluation function returning highest evaluation
 - ☐ Evaluation function returning lowest & highest evaluation
 - ☐ None of them is applicable
12. What is the heuristic function of greedy best-first search?
- ☐ $f(n) \neq h(n)$
 - ☐ $f(n) < h(n)$
 - ☒ $f(n) = h(n)$
 - ☐ $f(n) > h(n)$
13. The character of Playing tic-tac-toe is fully observable:
- ☒ True
 - ☐ False
14. The character of self Taxi drive is dynamic:
- ☒ True
 - ☐ False
15. The performance measure for the PEAS description for medical diagnosis agent is:
- ☐ Screen display
 - ☐ Keyboard
 - ☒ Minimize costs
 - ☐ None of the above
16. The Sensor for the PEAS description for self drive car agent is:
- ☒ Camera
 - ☐ Light
 - ☐ Horn
 - ☐ None of the above
17. The Actuators for the PEAS description for self drive car agent is:
- ☐ Keyboard entry
 - ☐ Set of student
 - ☐ Student score
 - ☒ None of the above

The following figure is example search problem and the search tree, the initial state is S and the Goal is G



$$\begin{aligned}
 h(S) &= 12 \\
 h(A) &= 8 \\
 h(B) &= 12 \\
 h(C) &= 3 \\
 h(D) &= 7 \\
 h(E) &= 1 \\
 h(G) &= 0
 \end{aligned}$$



- Depth First Search :

SBG

- Greedy

SADG

- A*