

# Test 1: Answers

September 26, 2019

1. Depth-First search is a complete search method. F
2. Space complexity of a search method cannot be represented by the big-O notation. F
3. Steepest ascent hill climbing wont be trapped by a local optimal solution. F
4. The best-first search will never miss the goal, if there is one. T
5. An admissible heuristic might overestimate the come of moving from a given state to the goal state. F
6. In a semantic net, the links represent objects and the nodes represent relationships between those objects. F
7. A good frame knowledge representation can be easily translated into first order predicate knowledge and be managed by rule-based system. F
8. Inheritance allows us to specify properties of a super class and then define a subclass to inherit the properties from its super class. T
9. A frame system consists of a set of frame that are connected together by slot values. T
10. Frames are object-oriented knowledge representation that can be used to build intelligent systems. T
11. The semantic net approach allows all information about a particular object to be stored together. F
12. In frame knowledge representation, a when-needed procedure will run automatically. F
13. By applying goal reduction, a given problem can be represented as a goal tree which will lead to a none-recursive solution. F
14. Goal driven inference tends to infer more than necessary. F
15. The Chinese room experiment was designed to promote the idea of strong AI. F
16. the followers of weak AI believe that a computer can fall in love with a human. F

17. Strong method problem solving depends on the weak method. T
18. The expert system shell is an implementation of weak method. T
19. In the early history of AI, the General Problem Solver (GPS) was an attempt to use strong methods to solve a wide range of general problems. F
20. The propositional and predicate logic off logical reason are based on the logic invented by Aristotle. T

Search Tree for part 2 of test 1.

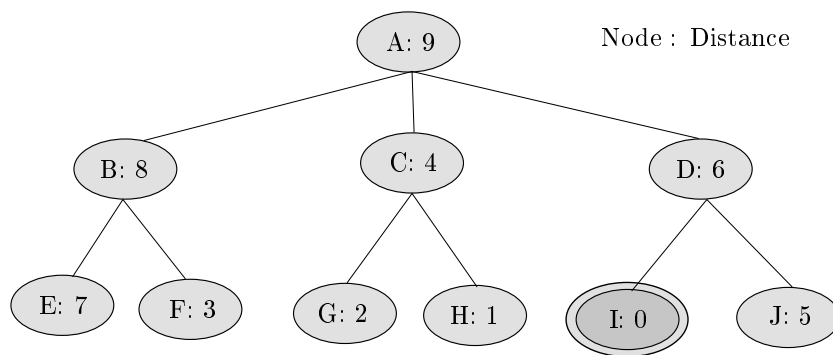


Figure 1: Search Tree, Goal Node I

Steepest Ascent hill climbing: A, C, H

Best First Search: A, C, H, G, D, I

Beam Search with beam width set to 2: A, C, H, G