2 A BFS

S-A-B-D-G1 S-A-G1

2 B DFS

S-A-B-C-F-D-E-G3 S-A-B-C-F-D-E-G3

2 C UCS

S-A-D-C-B-E-G2 S-D-C-G2

2D A\*

S-A-B-D-C-G2 S-D-C-G2

2E Greedy Best First Search

S-B-C-G2 S-B-C-G2

2F

Ans: ii , iv, v

ii: Given h1 and h2 are admissible, min(h1, h2) will either be h1 or h2. Again admissible.

iv: Given h1 and h2 are admissible, max(h1, h2) will either be h1 or h2. Again admissible.

V: Given h1 and h2 are admissible, mean of h1 and h2 will be <= max(h1, h2). Again admissible.

4 (Root, 4), (A, 4), (B, 3), (C, 2), (D, 4), (E, 6), (F, 9), (G, 3), (H, 2), (I, 6) 1% each

(I, 6), (M, 5), (T, 6), (U, 4)

The value of the root will change depending on the weights of the children. Since whatever the chances for child nodes are, the value for node A will be between 4 and 6, both larger than 2 and 3, thus being the result for this MIN-MAX tree.

The exploration will change depending on the weights of the children. If the weight for node “9” is larger than 1/6. The root value will be decided by node B. Otherwise, the value will be decided by A.

s U\_1 (s) π\_1 (s) s U\_1 (s) π\_1 (s)

A +1 3 A -0.8 3

B +1 4 B -0.8 4

C -2 1 C -1 2

D -1 3 D +89 3

E +10 3 E +100 3

F +100 3 F +100 3

G +100 2 G +100 2

H 0 0 H 0 0

A→C→B→D→F→G→H