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)**

**(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 -0.8 3**

**B +1 4 -0.8 4**

**C -2 1 -1 2**

**D -1 3 +89 3**

**E +10 3 +100 3**

**F +100 3 +100 3**

**G +100 2 +100 2**

**H 0 0 0 0**

**A→C→B→D→F→G→H**