

Question 1:

a)

Current Node	Open list	Closed list
-	(S,0,-)	
S	(A,2,SA), (B,9,SB)	(S,0,-)
A	(B,6,AB), (D,9,AD), (C,8,AC)	(S,0,-), (A,2,SA)
B	(D,9,AD), (C,8,AC), (F,18,BF)	(S,0,-), (A,2,SA), (B,6,AB)
D	(C,8,AC), (F,18,BF), (E,14,DE)	(S,0,-), (A,2,SA), (B,6,AB), (D,9,AD)
C	(F,13,CF), (E,13,CE)	(S,0,-), (A,2,SA), (B,6,AB), (D,9,AD), (C,8,AC)
F	(E,13,CE), (G,18,FG)	(S,0,-), (A,2,SA), (B,6,AB), (D,9,AD), (C,8,AC), (F,13,CF)
E	(G,15,EG)	(S,0,-), (A,2,SA), (B,6,AB), (D,9,AD), (C,8,AC), (F,13,CF), (E,13,CE)
G		(S,0,-), (A,2,SA), (B,6,AB), (D,9,AD), (C,8,AC), (F,13,CF), (E,13,CE), (G,15,EG)

b)

Current Node	Open list	Closed list
-	(S,0,-,11)	
S	(A,2,SA,14), (B,9,SB,15)	(S,0,-)
A	(B,6,AB,12), (D,9,AD,14), (C,8,AC,18)	(S,0,-), (A,2,SA)
B	(D,9,AD,14), (C,8,AC,18), (F,18,BF,24)	(S,0,-), (A,2,SA), (B,6,AB)
D	(C,8,AC,18), (F,18,BF,24), (E,14,DE,21)	(S,0,-), (A,2,SA), (B,6,AB), (D,9,AD)
C	(F,13,CF,19), (E,13,CE,20)	(S,0,-), (A,2,SA), (B,6,AB), (D,9,AD), (C,8,AC)
F	(E,13,CE,20), (G,18,FG,18)	(S,0,-), (A,2,SA), (B,6,AB), (D,9,AD), (C,8,AC), (F,13,CF)
E	(G,15,EG,15)	(S,0,-), (A,2,SA), (B,6,AB), (D,9,AD), (C,8,AC), (F,13,CF), (E,13,CE)
G		(S,0,-), (A,2,SA), (B,6,AB), (D,9,AD), (C,8,AC), (F,13,CF), (E,13,CE), (G,15,EG)

Question 2:

