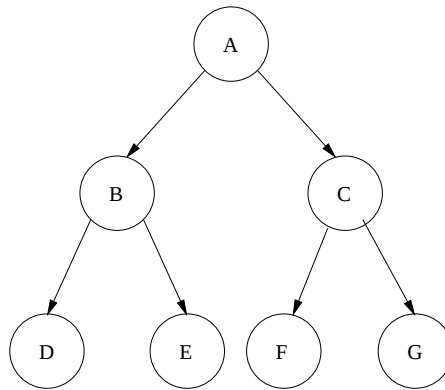


**Background Material Solutions**

1. a) Give the depth first order the nodes will be visited in the tree  
A B D E C F G
- b) Give the breadth first order the nodes will be visited in the tree  
A B C D E F G

2. Let A and B two logical propositions. Fill in the truth table for:

| A | B | $A \vee B$ |
|---|---|------------|
| F | F | F          |
| F | T | T          |
| T | F | T          |
| T | T | T          |

| A | B | $A \Rightarrow B$ |
|---|---|-------------------|
| F | F | T                 |
| F | T | T                 |
| T | F | F                 |
| T | T | T                 |

3. Let A and B be two random events. Given the following probabilities:

$$P(A \& B) = 0.5$$

$$P(A \& \neg B) = 0.3$$

$$P(\neg A \& B) = 0.1$$

- a)  $P(\neg A \& \neg B) = 0.1$

- b)  $P(A) = 0.8$