



Name : \_\_\_\_\_  
Student ID : \_\_\_\_\_ Section : \_\_\_\_\_  
Date : \_\_\_\_\_

|       |
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| Marks |
| 15    |

### QUESTION 1

Find the incidence matrix of the graph in figure 1.

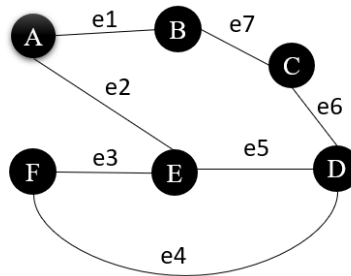


Figure 1

### QUESTION 2

Consider the tree  $T$  shown in figure 2.

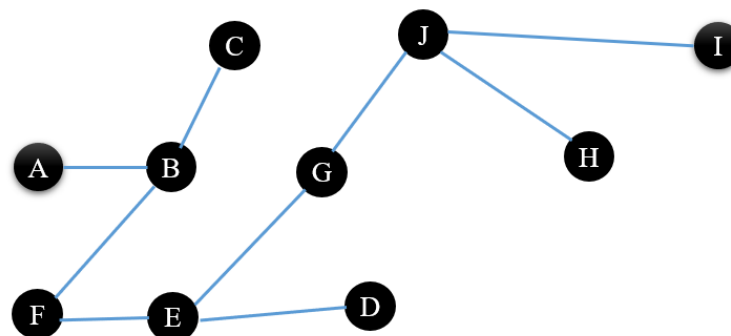


Figure 2

- Draw the tree  $T$  as a rooted tree with B as a root.
- What is the height of the resulting tree?
- Which vertices are internal?
- Which vertices are leaves?
- List the order in which the vertices of the rooted tree are processed using preorder traversal.
- Draw the subtree of the tree that is rooted at G