

Step Academy official

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| STUDENT NAME | |
| PAPER CODE | 27030 |
| TIME ALLOWED | 40 |
| Paper Date | 08-02-2026 |



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| CLASS | New 1st Year (FSC/ICS) |
| SUBJECT | Computer |
| TOTAL MARKS | 25 |
| Paper Type | |

Q1. Choose the correct answer.

5X1=5

1. The function used to add an item at the end of a list in Python:

- (A) insert() (B) append() (C) remove() (D) pop()

2. True statement about the height about the height of a tree:

- (A) Number of edges from the root to the deepest node
(B) Number of nodes from the root to the deepest node
(C) Number of children of the root node
(D) Always equal to the number of nodes in the tree

3. What is an element in a list?

- (A) The number of items
(B) The type of list
(C) An individual item stored in the list
(D) A function applied to the list

4. Which Python data structure can be used to create a stack?

- (A) Set (B) List (C) Dictionary (D) Tuple

5. In a balanced tree, what is true about its branches?

- (A) One side is always taller
(B) Both branches are of exactly equal height
(C) Both sides have nearly the same height
(D) It has no leaf nodes

Q2. Write short answers of the following questions.

5X2=10

1 . Explain how the 'insert()'function works in python lists. Provide an example.

2 . What is a graph in data structures?

3 . How is a graph different from a tree?

4 . Give a real-life example of a graph.

5 . What is the degree of a vertex?

Q3. Write detailed answers of the following questions.

2X5=10

1 . Discuss the dynamic size property of lists in Python. How does this property make lists more flexible?

2 . Explain the operations on stack with real-life example and Python code.