



## University of South Asia

| Quiz 01 |                               |             |            |
|---------|-------------------------------|-------------|------------|
| Session | Spring 2025                   | Total Marks | 10         |
| Subject | Data Structure and Algorithms | Date        | 31-01-2025 |

|                 |              |            |                  |
|-----------------|--------------|------------|------------------|
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| Program         | BSCS         | Section    | C                |

**Instructions:**

- Read each question carefully and understand it fully before answering.
- Write only the required output where needed; avoid unnecessary code or explanations.
- Focus on clear, to-the-point answers.

**Q1: Write the output of the following code snippet. [CLO-3] (1 Mark)**

```
void swap(int array[], int &variable)
{
    variable = 10;
    array[0] = 10;
}

int main()
{
    int array[] = {1, 2, 3, 4, 5, 6};
    int variable = 1;
    cout << variable << endl << array[0];
}
```

**Q2: Write a C++ program to find both the minimum and maximum elements in the following array using a single while loop.** [CLO-5] (2 Marks)

```
int array[8] = {12, 45, 3, 22, 9, 67, 4, 18};
```

**Q3: Use-Case Scenario** [CLO-1,7] (1 Mark)

A student wants to repeatedly insert elements into an array until the user decides to stop.

- Which loop (for, while or do-while) would you recommend and why?

**Q4: Write a C++ function to delete all elements with the value 20 from the following array.** [CLO-4,5] (3 Mark)

```
int array [7] = {20, 10, 15, 20, 25, 30, 30};
```

**Q5: Write a do-while loop in C++ to print only odd numbers from 1 to 9.** [CLO-1,5] (2 Mark)

**Q6: What will be the output of the following code?** [CLO-7] (1 Mark)

```
int x = 5;
do {
    cout << x << " ";
    x++;
}
while (x < 5);
```

- A) 5
- B) No output
- C) 5 6
- D) None of the above