**Bahria University, Lahore Campus**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Enrollment: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Department of Computer Science

**Quiz 01**

**(Spring 2023)**

|  |  |  |  |
| --- | --- | --- | --- |
| Course: | **Data Structures and Algorithm** | | Date: **23-Feburary-2023** |
| Course Code: | CSC-211 | Max Marks: **10** | |
| Faculty’s Name: | Ms. Zupash Awais |  | |

|  |  |
| --- | --- |
| **CLOs** | |
| CLO1 | Explain and compare different data structures and their applications |
| CLO2 | Apply appropriate data structures according to the given scenarios and application domain |
| CLO3 | Analyze time complexity of different algorithms |
| CLO4 | Design efficient algorithm(s) to solve real world problems |

**Question 01: [02]**

Predict Output

|  |  |  |
| --- | --- | --- |
| **Sr.No.** | **Code** | **Output** |
| 1. | int add(int\* x, int\* y)  {  return \*x + \*y;  }  int func(int \*x, int c)  {  c = c - 1;  if (c == 0)  return 1;  \*x = \*x + 1;  c = \*x;  return add(x,&c) \* (\*x);  }  int main()  {  int p = 5;  cout<< func(&p, p);  } |  |

**Question 02: [03]**

Take an array of 10 elements. Split it into middle and store the elements in two different arrays. E.g.-  
***Initial array:***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **58** | **24** | **13** | **13** | **63** | **9** | **8** | **81** | **8** | **78** |

***After splitting:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **58** | **24** | **13** | **13** | **63** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **9** | **8** | **81** | **1** | **78** |

After splitting add 5 in each element of array1 and multiply 5 with each element of array2 then display the answer E.g.:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **63** | **29** | **18** | **18** | **68** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **45** | **40** | **405** | **40** | **390** |