**Computer Science and Information Technology Department, UoB, Quetta**

**Course: Fundamentals of Programming**

**Reappear Exam 2023**

**Time allowed: 90 minutes Roll No: \_\_\_\_\_\_\_\_\_\_ Max marks: 70**

**NOTE: Cutting/ Overwriting not allowed. Return objective type after 10 minutes.**

**Question No 1: Select the correct option. (20 x 2 = 40 marks)**

1. Which data type is suitable for storing one of the grade values A, B, C, D

|  |  |  |
| --- | --- | --- |
| * 1. char | * 1. float | * 1. int |

1. The data type int occupies how many bytes in memory

|  |  |  |
| --- | --- | --- |
| * 1. 1 | * 1. 2 | * 1. 8 |

1. Which of the following is not a valid variable name

|  |  |  |
| --- | --- | --- |
| * 1. \_average | * 1. average\_ | * 1. 3rdaverage |

1. Character data type cannot store which of the following values

|  |  |  |
| --- | --- | --- |
| * 1. 4.7 | * 1. 3 | * 1. H |

1. If the length of the array is 8 the last value is stored at index

|  |  |  |
| --- | --- | --- |
| * 1. 8 | * 1. 7 | * 1. 9 |

1. Which of the following is not a binary operator

|  |  |  |
| --- | --- | --- |
| * 1. % | * 1. + | * 1. ++ |

1. Which of the following is not a valid format specifier

|  |  |  |
| --- | --- | --- |
| * 1. %z | * 1. %d | * 1. %c |

1. Which of the following is not a valid escape sequence

|  |  |  |
| --- | --- | --- |
| * 1. \t | * 1. \w | * 1. \f |

1. Which of the following is not an assignment statement

|  |  |  |
| --- | --- | --- |
| * 1. a += 2; | * 1. a = a + 2; | * 1. a + 2; |

1. Which expression in c correctly describe the phrase “two is not equal to three”

|  |  |  |
| --- | --- | --- |
| * 1. 2 != 3 | * 1. 2 = ! 3 | * 1. 2 <> 3 |

1. Suppose an array marks has 8 elements, if we try to execute printf(“%d”, marks[9]);

|  |  |  |
| --- | --- | --- |
| * 1. It will not compile | * 1. Will run | * 1. It will produce error |

1. If 1= increment, 2= conditional test and 3 = initialization what is their correct order in for ()

|  |  |  |
| --- | --- | --- |
| * 1. for(1; 2 ; 3 ) | * 1. for(3; 1 ; 2 ) | * 1. for(3; 2 ; 1 ) |

1. To store the characters BSCS in an array, which of the following is correct

|  |  |  |
| --- | --- | --- |
| * 1. char array[5]; | * 1. char array[4]; | * 1. Both a and b |

1. Result = 3 % 4 ; what will be the value of Result

|  |  |  |
| --- | --- | --- |
| * 1. 4 | * 1. 3 | * 1. 1 |

1. What is the correct way of declaring a 2 dimensional array to store 9 integer values

|  |  |  |
| --- | --- | --- |
| * 1. int array[][]=9; | * 1. int array[3][3] | * 1. int array[9][9]; |

1. Which of the following is valid expression in c language

|  |  |  |
| --- | --- | --- |
| * 1. a < 3 && b > 2 | * 1. a < 3 & b > 2 | * 1. a < 3 and b > 2 |

1. Which of the following is used to comment a line of code

|  |  |  |
| --- | --- | --- |
| * 1. \\ | * 1. // | * 1. \*/ |

1. for(a = 1 ; a < 3 ; a ++) ; { printf(“inside for loop”); } will print how many times

|  |  |  |
| --- | --- | --- |
| * 1. 0 | * 1. 3 | * 1. 2 |

1. Which header file is included in every c program for dealing with input output functions

|  |  |  |
| --- | --- | --- |
| * 1. stdio.h | * 1. stdlib.h | * 1. Both a and b |

1. int a =4 ; printf(“%d” , a + 6 ); what will be the value of a after executing these 2 statements

|  |  |  |
| --- | --- | --- |
| * 1. 6 | * 1. 4 | * 1. 10 |

**Question No 2:** Dry Run the following program and write its output. **(10 marks)**

#include <stdio.h>

int main()

{

int count = 0, result = 1, sum=0;

for( count = 6; count > 0 ; count -- )

{

result \*= count;

sum += result;

}

printf("\n sum = %d", sum);

return 0;

}

**Question No 3: Write a program following instructions below:** **(10 marks)**

1. declare a function **factorial** which takes 1 integer argument and returns an integer

2. the function should calculate factorial e.g. factorial of 4 = 1 x 2 x 3 x 4

3. call **factorial** function passing 7 as argument from **main** function

4. display the factorial using **printf**

**Question No 4: Write a program following instructions below:** **(10 marks)**

1. declare and intialize an integer array **marks** and store any 10 integers in it.

2. calculate the **sum** and **average** of integers in **marks** array

3. display the sum and average using **printf**