UNIVERSITY OF THE PUNJAB
B.S. 4 Years Program / Fourth Semester – 2019

Roll No. ....

Paper: Computer Science-II
Course Code: COMP-212 / IT-22335   Part – II

Time: 2 Hrs. 45 Min.   Marks: 50

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Q.2.	Write short answers of the following Questions:	
i.	Discuss with example the following terms in C++: a) **for** (b) **while** (c) **void main()**	6
ii.	Write C++ program which reads in a number from the user and calculates its cube.	4
iii.	Write C++ program code segment for the following: (a) To sort the data in the array in ascending order. (b) To read 10 numbers from user and print sum of them. (c) To read and print values in reverse order in a linear array. (d) To read and print a matrix A (3x3) and print elements of 2nd column (e) To print out maximum of 2nd column of matrix A of part (d)	10
Q.3.	Write syntax for a linear array in C++? What is advantage of writing array for variables? Write C++ program which generates ten random numbers in the range of 1 to 10. Store numbers in an array and then sort the array elements in an ascending order. Execute the program iteratively and read 0 to stop it. Print proper output and input messages if any.	3+7
Q.4.	Suppose A, B, C, D and E are matrices (3x3). Write C++ program which reads in entries of A and B and prints out the entries of: i) $C = A + B$ and (ii) $D = 8A - 0.8B$. (iii) $E = \dfrac{B + 2019C'}{2022}$. (where C' is transpose of C).	10
Q.5.	Write syntax of user defined function in C++? What is advantage of user defined function? Write program to implement factorial function. Write C++ program to assign grades to students on the basis of total marks using switch statement. Ask user to enter score of subject: Assign A^+ for 90-100 A for 80-89. B for 70-79, C for 60-69, and Fail for <60 Implement above program for 30 students of the class. Also calculate average marks for the class.	5+5

UNIVERSITY OF THE PUNJAB

B.S. 4 Years Program / Fourth Semester – 2019

Paper: Computer Science-II
Course Code: COMP-212 / IT-22335   Part – I (Compulsory)   Time: 15 Min. Marks: 10

Roll No. in Fig. ....

Roll No. in Words. ....

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Signature of Supdt.:

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ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.
Division of marks is given in front of each question.
This Paper will be collected back after expiry of time limit mentioned above.

Q.1. Encircle the right answer cutting and overwriting is not allowed. (10x1=10)

i. To pick the odd out in C++ in the following:
   (a) int (b) float   (c) void   (d) double

ii. Which of the following is used to print data of 5th row 5th column in a matrix a?
   (a) cout<<a[5,5]   (b) cout<<a[4][4] (c) cout<<a[6,6] (d) cout<<a(4)(4)

iii. Which one is true for value of x if x = 1+rand()%10; then x will be in the range of?
   (a) 0 to 99   (b) 1 to 100   (c) 0 to 9 (d) 1 to 10

iv. What is output for the statements: for (int i =0; i<=5; i= i+2)
                                             cout<<i<<" ";
   (a) 0 2 4 (b) 0 2 4 6 (c) 0 2 4 5 (d) 0 1 2 3 4 5

v. How many total elements are there for matrix k such that: int k[5][4];
   (a) none   (b) 9 (c) 20 (d) 21

vi. If x =12 and y= 6, then for statement " x = = 2*x - 4*y" which result is true
   (a) 0 (b) 48   (c) true (d) none

vii. Which type is best suited to represent the integer values?
   (a) int (b) double (c) float (d) all of the mentioned

viii. The output of program
        void main() {
            int a[3][3]={{6,7,8},{3,9,10},{11,22,33}};
            cout<<a[2][1];
            getch(); }
      is given by:

        a) 22   (b) 7   (c) 3 (d) 9   (e) 33

ix if a = 5 for b= a++; and c = ++a; then which of the following is correct:
   (a) a, b and c are all equal (b) a and b are equal (c) a and c are equal   (d) none
x.   Pick the odd one out in C++:
   (a) int, char, void (b) for, while (c) switch, while   (d) none