



HDV-003-0011007 Seat No. _____

B. Sc. (C.A.) (Sem. I) (CBCS) Examination

November / December – 2017

CS - 101 : Programming Fundamentals using C & C++

Faculty Code : 003

Subject Code : 0011007

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- 1 (a) Answer the following short question : 4
- (1) Who developed C language ?
 - (2) Give the full form of OOP.
 - (3) What is the use of printf() functions in C language ?
 - (4) Which operators are used for give comment for single and multiple in C and C++ ?
- (b) Answer any **one** of the following question : 2
- (1) What is C ?
 - (2) Give the difference between POP vs OOP.
- (c) Answer any **one** of the following question : 3
- (1) Write a program to check whether entered number is positive or negative.
 - (2) Write a program to find square and cube of entered value.
- (d) Answer any **one** of the following question : 5
- (1) Basic structure of C language.
 - (2) Explain char, integer, float, double data type in detail.
- 2 (a) Answer the following short question : 4
- (1) Define function.
 - (2) List the logical operator.
 - (3) Write a program to print “SAURASHTRA UNIVERSITY, RAJKOT” using cout.
 - (4) Give the syntax of nested do...while loop.
- (b) Answer any **one** of the following question : 2
- (1) What is array ? List out the types of array.
 - (2) Explain “for” loop with its syntax.

- (c) Answer any **one** of the following question : **3**
- (1) Write a program to generate below pattern using loop :
- ```

1 2 3 4 5
1 2 3 4
1 2 3
1 2
1

```
- (2) Write a program to generate below pattern using loop :
- ```

1
2 2
3 3 3
4 4 4 4
5 5 5 5 5

```
- (d) Answer any **one** of the following question : **5**
- (1) Explain nested if...else with example.
- (2) Write a program to interchange two different value using call by reference.
- 3** (a) Answer the following short question : **4**
- (1) How to declare values in multi-dimensional array?
- (2) Define Union.
- (3) Give the full form of calloc().
- (4) List out the preprocessor directives.
- (b) Answer any **one** of the following question : **2**
- (1) Define memory allocation.
- (2) Difference between static vs dynamic memory allocation.
- (c) Answer any **one** of the following question : **3**
- (1) Difference between structures vs union.
- (2) Difference between malloc() vs calloc().
- (d) Answer any **one** of the following question : **5**
- (1) Explain structure with example.
- (2) Write a C program to find sum of n elements entered by user. To perform this program, allocate memory dynamically using malloc() function.

- 4 (a) Answer the following short question : 4
- (1) In array, first value stored in _____ index value.
 - (2) Define pointer.
 - (3) What pointer variable stored ?
 - (4) How to declare pointer ?
- (b) Answer any **one** of the following question : 2
- (1) Difference between pointers vs reference.
 - (2) Give the example of pointer to pointer.
- (c) Answer any **one** of the following question : 3
- (1) Explain NULL pointer.
 - (2) What are the Drawbacks of pointer ?
- (d) Answer any **one** of the following question : 5
- (1) What are the advantages of pointer ?
 - (2) Explain functions overloading with example.
- 5 (a) Answer the following short question : 4
- (1) Define overloading.
 - (2) List out the blocks which are used in exception handling.
 - (3) Define object in C++.
 - (4) Define member function in C++.
- (b) Answer any **one** of the following question : 2
- (1) What is destructor ?
 - (2) What is friend function ?
- (c) Answer any **one** of the following question : 3
- (1) Explain the use of private, protected and public declaration in C++.
 - (2) Write a program to find volume of rectangle using class and object.
- (d) Answer any **one** of the following question : 5
- (1) Explain constructor with example.
 - (2) Explain inheritance, give the types of inheritance and give the example of single inheritance.