



TDC (CBCS) Odd Semester Exam., 2018

COMPUTER SCIENCE

(1st Semester)

Course No. : CSCGEC-101T/CSCDSC-101T

(Programming Fundamentals Using C/C++)

Full Marks : 50

Pass Marks : 20

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

UNIT—I

1. Answer any *three* questions from the following : 1×3=3
 - (a) Why is main function special in C++?
 - (b) Why is char often treated as integer data type in C++?
 - (c) What is type casting?
 - (d) What is the effect of absence of break in switch case?

2. (a) Differentiate between procedural programming and object-oriented programming. 2



Or
(b) What is the difference between local variable and global variable? 2

3. (a) What is an operator? Describe the different types of operators with their suitable applications. 1+4=5

Or
(b) Write an iterative program to determine whether an integer is prime or not. 5

UNIT—II

4. Answer any three questions from the following : 1×3=3

- (a) What is the purpose of 'return' statement in function?
- (b) What is inline function?
- (c) Why is array called static variable?
- (d) What is the advantage of union?

5. (a) Differentiate between declaration and definition of function. 2

Or
(b) What do you mean by initializing an array? Give an example. 2

6. (a) Compare and contrast between call by value and call by reference with suitable example. 5

Or
(b) Write a C++ program to illustrate the passing of an array to a function as argument. 5

UNIT—III

7. Answer any three questions from the following : 1×3=3

- (a) What do you mean by data type of a pointer?
- (b) What is dynamic memory allocation?
- (c) What is static variable?
- (d) What is the role of #define in C++?

8. (a) What are the problems with pointers? 2

Or
(b) Differentiate between pointers and references. 2

9. (a) Distinguish among calloc, malloc and free function. 5

Or
(b) Write a C++ program to illustrate the returning a pointer from a function. 5



UNIT—IV

10. Answer any *three* questions from the following : 1×3=3

- (a) Define class.
- (b) What is encapsulation in C++?
- (c) What is virtual base class?
- (d) What do you mean by private member function?

11. (a) Define the term 'constructor'. What is copy constructor? 2

Or

- (b) What are objects? How are they created? 2

12. (a) What is friend function? What are the merits and demerits of friend function? 2

1+4=5

Or

- (b) Write a program to illustrate the concept of parameterized constructors. 5

UNIT—V

13. Answer any *three* questions from the following : 1×3=3

- (a) What is operator overloading?
- (b) What is polymorphism?
- (c) What is inheritance?
- (d) What do you mean by exception?

14. (a) What are the limitations of multiple inheritance? 2

Or

- (b) Define try, catch and throw. 2

15. (a) Write a C++ program to define three overloaded functions to swap two integers, swap two floats and swap two doubles. 5

Or

- (b) Explain the visibility of base class member for the access specifier; private, protected and public while creating derived class. 5
