

Roll No.

Total Pages : 3

240205

May, 2019

M.Sc. (Mathematics)- II SEMESTER

Programming in C++ (Math17-111)

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART-A

1. (a) Write two applications of C++ programming. (1.5)
- (b) How to create a symbolic constant in C++? (1.5)
- (c) What do you mean by function overloading? (1.5)
- (d) What is null pointer? (1.5)
- (e) Give two examples of manipulator operator. (1.5)
- (f) Define template function. (1.5)

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- (g) What is virtual function? (1.5)
- (h) What does this pointer point to? (1.5)
- (i) What are data types? (1.5)
- (j) What is polymorphism? (1.5)

PART-B

- 2. (a) Discuss in details the following concepts of object-oriented programming :
 - (i) Classes.
 - (ii) Objects. (5×2)
 - (b) Write a program to describe the use of inline function in C++. (5)
3. (a) Write a program to illustrate how an object can be created (within a function) and returned to another function. (8)
- (b) What is default constructor and what is copy constructor? Give examples. (7)
4. (a) Write two operators which cannot be overloaded and two rules for overloading operators. (5)
- (b) Illustrate inheritance with a simple programming. (10)

- 5. (a) Write a program to explain how to declare and define function pointers in C++. (10)
 - (b) What do you mean by arrays within a class? Explain with example. (5)
6. (a) Write a program to create a file using open () function. (8)
- (b) Write down the keywords of C++ exception handling mechanism and their uses. (7)
7. Write short notes on :
 - (i) Friendly function.
 - (ii) Run-time error.
 - (iii) Random access. (5×3)