No. of Printed Pages—2

1013 (M300P)

[21-HRPD3SN-22J]

MScIT 3rd Semester (New) Exam., 2021 (W)

OBJECT-ORIENTED PROGRAMMING THROUGH C++

[MScIT S3-02]

Full Marks : 50

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Answer any *four* of the following questions : 1×4=4

(a) Mention two benefits of object-oriented programming.

(b) What is the use of copy constructor?

(c) What is function overloading?

(d) What is inline function?

(e) Write the difference between multiple and multilevel inheritance in C++.

2. Answer any *four* from the following questions : 3×4=12

(a) What is the use of reference variable in C++? Write the syntax for creating a reference variable with an example.

(b) What is stream in C++? Mention the purposes of extraction and insertion operators in C++.

(c) What is the difference between a class and a structure?

(d) What is a destructor in C++? Is it possible to overload destructor in C++ programs?

(e) How are the address operator and pointer variables related? Why are 'new' and 'delete' operators used?

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3. Answer any *four* from the following questions : 4×4=16

(a) Explain the use of friend function with the help of a suitable example.

(b) Write a C++ program to show the overloading of constructors.

(c) Explain multipath inheritance.

(d) Describe the concept of polymorphism.

(e) Describe file pointer in C++. How are they used?

4. Answer any *three* of the following questions : 6×3=18

(a) Give the difference between class diagram and object diagram. Briefly describe the components of class diagram. 2+4=6

(b) Write short notes on any *two* of the following : 3×2=6

(i) Virtual function

(ii) Scope resolution operators

(iii) Data abstraction

(c) How are function templates declared? Explain using an example.

(d) What are the different types of storage classes in C++? Explain with examples.

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