

**G-48-20**

Roll No.....

**Annual Examination, 2020**

**B.Sc Part II**

**INFORMATION TECHNOLOGY**

**Paper II**

**(Programming in C++)**

**Time : 3 Hours ]**

**[ MAXIMUM MARKS : 50**

**Note :** Section 'A' is Objective type and is compulsory. It should be written on the **first page** of Answer-book. Section 'B' is Short answer type and Section 'C' is Long answer type.

**Section 'A'**

**(Multiple Choice Questions)**

Choose the correct answer : **1×10=10**

1. Which looping process checks the test condition at the starting of the loop ?  
(a) while                      (b) for      (c) do-while  
(d) no looping process checks the test condition at the end
2. Which feature of OOP indicates one name multiple form ?  
(a) Encapsulation      (b) Inheritance  
(c) Message passing      (d) Polymorphism.

P.T.O.

3. Which of the following function/types of function cannot have default parameters ?
- (a) Member function of class    (b) main( )
  - (c) Member function of structure
  - (d) All the above.
4. Choose the incorrect statements regarding inline functions :
- (a) It speeds up execution
  - (b) It slows down execution
  - (c) It increases the code size
  - (d) Both 'a' and 'c'.
5. In case of inheritance where both base and derived class are having constructor and destructor, then which of the following are true?
- 1. Constructors are executed in their order of derivation
  - 2. Constructors are executed in reverse order of derivation
  - 3. Destructors are executed in their order of derivation
  - 4. Destructors are executed in reverse order of derivation

- (a) only 2, 4                      (b) only 1, 3  
 (c) only 1, 4                      (d) only 2, 3.
6. A way to reuse existing classes to create new classes, is called :
- (a) Composition                      (b) Inheritance  
 (c) Containment                      (d) Thread class.
7. Which of the following is/are pointer-to-member declarator ?
- (a)  $\rightarrow^*$    (b)  $\cdot^*$    (c)  $::^*$    (d) both 'a' and 'b'.
8. Virtual functions are functions that can be overridden in ..... class with the same signature.
- (a) base class                      (b) derived class  
 (c) both 'a' and 'b'                      (d) none of these.
9. To create an output stream, we must declare the stream to be of class .....
- (a) ofstream                      (b) ifstream  
 (c) iostream                      (d) None of these.
10. Which of the following is the default mode of the opening using the ifstream class ?
- (a) ios::in                      (b) ios::out  
 (c) ios::app                      (d) ios::trunc.

**Section 'B'**

**(Short Answer Type Questions) 5×3=15**

**Note :** All the **five** questions are compulsory.

1. Explain concept of reusability and polymorphism.

Or

Explain the overview of C++ programming.

2. What is inline function ? Explain with suitable example.

Or

How passing default arguments to function ?  
Explain with example.

3. Describe benefit of friend function.

Or

Write any C++ program to demonstrate the use of constructor.

4. Explain pointer to pointer with example.

Or

Explain virtual function with example.

5. What are C++ stream class ? Explain it.

Or

Explain string I/O with example.

**Section 'C'**

**(Long Answer Type Questions) 5×5=25**

**Note :** All the **five** questions are compulsory.

1. Describe the characteristics of object-oriented languages.

Or

Write a C++ program to display odd numbers between 1 to 50.

2. Write a C++ program to addition and multiplication of any two numbers using user defined function.

Or

What do you mean by function overloading ?  
Explain with suitable example.

3. Explain operating overloading with suitable C++ program.

Or

Describe types of Inheritance with example.

4. Explain the following :
  - (i) pure virtual function,
  - (ii) new and delete operator.

Or

Write any C++ program using pointer and string.

5. Write a C++ program using any three manipulators.

Or

Explain char I/O and object I/O with example.

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