

2020*Time : 3 hours**Full Marks : 80*

Candidates are required to give their answers in their own words as far as practicable.

The questions are of equal value.

*Answer **five** questions in which*

Q. No. 1 is compulsory.

1. Choose the correct alternative of the following :
 - (a) Which operator is used to simultaneously evaluate two expressions with relational operators ?
 - (i) AND
 - (ii) OR
 - (iii) NOT
 - (iv) All of these

(b) Which return type cannot return any value to the caller ?

- (i) Int
- (ii) Float
- ✓ (iii) Void
- (iv) Double

(c) Dynamic memory allocation is done using :

- (i) Calloc ()
- (ii) Malloc ()
- (iii) Allocate
- ✓ (iv) New

(d) A constructor can be :

- (i) Virtual
- (ii) Static
- (iii) Volatile
- ✓ (iv) None of these

(e) Constructors and destructors are automatically invoked by :

- (i) Operating System
- ✓ (ii) Compiler
- (iii) Main ()
- (iv) Object

(f) A multi-level inheritance, the middle class acts as :

- (i) Base Class
- (ii) Derived Class
- ✓ (iii) Both (i) and (ii)
- (iv) None of these

(g) Compile time polymorphism is a variant of :

- (i) Static binding
- ✓ (ii) Dynamic binding
- (iii) Both (i) and (ii)
- (iv) None of these

(h) Which function links a stream to a file ?

- (i) Connect ()
- (ii) Link ()
- ✓ (iii) Open ()
- (iv) All of these

2. What is different Paradigm in OOP ? Explain the program structure in C++.
3. What is Function Overloading ? Describe the rules for defining overloaded function. What precautions should we take while overload function ?
4. What do you mean by Virtual Class and Abstract Class ? Explain the mechanism for accessing private members of base class using pointers.

5. What do you mean by Virtual Function ? Explain with example. What is the difference between virtual function and virtual classes ?
6. (a) What is Polymorphism ? Explain compile time and run time binding.
(b) Write a program to declare pure virtual function.
7. Define Exception. Give some common examples of exception that often in our program code.
8. What is a generic function ? What are its types ? How to overload a generic function ?
9. Write shorts notes on any two of the following :
 - (a) Error Handling
 - (b) Inheritance
 - (c) Throwing and Catching Exception
 - (d) Operator Overloading
 - (e) Input/Output Stream

