

2017

Full Marks : 100

Time : 3 hours

The questions are of equal value

Answer **five** questions including Question 1 which is compulsory

1. Choose the correct answers of the following :

(a) The packing of data and functions into a single components is known as

- (i) abstraction
- (ii) encapsulation
- (iii) overloading
- (iv) None of these

(b) C++ language was invented by

- (i) Bjarne Stroustrup
- (ii) Dennis Ritchie
- (iii) Ken Thompson
- (iv) Charles Babbage

(c) Java compiler translates source code into

- (i) machine code

(ii) source code

(iii) bit code

(iv) byte code

(d) Java does not support

(i) multiple inheritance

(ii) simple inheritance

(iii) multilevel inheritance

(iv) None of these

(e) The size of int data type in C++ is

(i) 2 bytes

(ii) 8 bytes

(iii) 0 byte

(iv) None of these

(f) The output of the following loop is

```
for(i = 5, i <= 10; i ++);
cout << i;
```

(i) 10

(ii) 5

(iii) 11

(iv) None of these

(g) Constructors and destructors are automatically invoked by

(i) compiler

(ii) operating system

(iii) object

(iv) main() function

(h) Which one of the following is correct declaration statement in Java program?

(i) int num = new int[5][2]

(ii) int num = new num[5][2]

(iii) int [][] num = new int[5][2]

(iv) None of these

(i) Theoretically which one is the finite loop?

(i) while

(ii) for

(iii) do....while

(iv) None of these

(j) The size of Unicode format is

(i) 7 bits

(ii) 8 bits

(iii) 16 bits

(iv) None of these

2. What do you mean by OOPs? Discuss the various features of OOPs.

3. Explain why do we need to use constructors? What are the advantages? Explain a copy constructor with example.

4. Write a C++ program to show that the declaration of a class 'rectangle', which derives from the class 'square' which in turn derives from the class 'shape'.

5. Define inheritance. Describe various types of inheritance with examples.

6. What is overloading? Explain different types of overloading with examples.

7. What is package? How do you create a package? Give an example.

8. Write a Java program to find the greatest number among given n data.

9. What is applet? Write an applet program to pass the parameter(s).

10. Write short notes on any three of the following :

(a) Stream class

(b) Artificial intelligence

(c) Thread

(d) Interface

(e) Wrapper class.