2016

Time : 3 hours

Full Marks : 100

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

The questions are of equal value.

Answer any five questions, in which question no 1 is compulsory.

1. Choose the correct answer of the following :

(a) C++ language was invented by :

   (i) Ken Thompson

   (ii) Dennis Ritche

   (iii) Bjarne Stroustrup

   (iv) None

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

   (i) Encapsulation

   (ii) Polymorphism

   (iii) Abstraction

   (iv) None

(c) In nested loop :

   (i) The inner most loop is completed first

   (ii) The outermost loop is completed first

   (iii) Both (i) and (ii)

   (iv) None

(d) Constructor and destructors are automatically invoked by :

   (i) Compiler

   (ii) Operating system

   (iii) main ( ) function

   (iv) object

(e) The size of void pointers is :

   (i) 2 bytes

   (ii) 0 bytes

   (iii) 4 bytes

   (iv) None

(f) Which one of the following operator cannot be overload :

   (i) Dot operator [.]

   (ii) Plus operator [+]

   (iii) Ampersand operator [^]

   (iv) -- operator

(g) Java compiler translates source code into :

   (i) Byte code

   (ii) Bit code

(iii) Machine code

(iv) User code

(h) Java provides extensive set of classes, arranged in :

(i) Package

(ii) Library file

(iii) Template class

(iv) None

(i) Java does not support :

(i) Operator overloading

(ii) Global variable

(iii) Multiple inheritance

(iv) All

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

(i) int num = new int [5]

(ii) int num = new num [5]

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

(iv) None

2. What do you mean by object orienterd programming language ? Discuss the various features of OOPS. How java is different from C++. Explain.

3. What is function overloading ? What are the rules for defining overloaded function ? What precautions should we taken while overloading function ?

4. What are pointers ? What are the features and uses of pointers ? In which situation does the pointer become harmful.

5. What do you mean by inheritance ? Describe the various types of inheritance with example.

6. What is thread ? How many ways a thread can be created ? Illustrate the pros and cons of different ways of creating a thread.

7. What is package ? How do you create a package ? How does a package declaration affect a class definition ?

8. What are interfaces ? How are interfaces created and implemented in java ? How is an interface different from class.

9. Explain the concept of class, objects and methods in java. Also write a program to explain the concept of overloading methods with reference to class.

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

(a) Constructor and destructor

(b) Stream class

(c) Java virtual machine

(d) Wrapper class

(e) Artificial intelligence

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165/5/53/2   (3)   (Turn over)

165/5/53/2   (4)   (P-4000)