Group A

Multiple Choice Question (30 Questions)   30 * 1 = 30

1. Who invented Java Programming?

   a) Guido van Rossum   **b) James Gosling**

   c) Dennis Ritchie   d) Bjarne Stroustrup

2. Which statement is true about Java?

   a) Java is a sequence-dependent programming language

   b) Java is a code dependent programming language

   c) Java is a platform-dependent programming language

   d) Java is a platform-independent programming language

3. What is the extension of java code files?

   a) .js   b) .txt

   c) .class   **d) .java**

4. What is the output of the following code?

```
class increment {
    public static void main(String args[])
    {
        int g = 3;
        System.out.print(++g * 8);
    }
}
```

   a) 32   b) 33

   c) 24   d) 25

5. Which of the following is a type of polymorphism in Java Programming?

   a) Multiple polymorphism   **b) Compile time polymorphism**

   c) Multilevel polymorphism   d) Execution time polymorphism

6. What is the output of following program?

```
class leftshift_operator
{
    public static void main(String args[])
    {
        byte x = 64;
```

```
        int i;
        byte y;
        i = x << 2;
        y = (byte) (x << 2)
        System.out.print(i + " " + y);
    }
}
```

a) 0 256   b) 0 64

c) 256 0   d) 64 0

7. Which exception is thrown when java is out of memory?

a) MemoryError   **b) OutOfMemoryError**

c) MemoryOutOfBoundsException   d) MemoryFullException

8. What is the output of following code?

```
class box
{
    int width;
    int height;
    int length;
}
class main
{
    public static void main(String args[])
    {
        box obj = new box();
        obj.width = 10;
        obj.height = 2;
        obj.length = 10;
        int y = obj.width * obj.height * obj.length;
        System.out.print(y);
    }
}
```

a) 100   b) 400

c) 200   d) 12

9. Which one of the following is not an access modifier?

a) Protected   **b) Void**

c) Public   d) Private

10. What is stored in the object obj in the following lines of Java code?

box obj;

a) Memory address of allocated memory of object   **b) NULL**

c) Any arbitrary pointer   d) Garbage

11. Which of these statements is incorrect?

   a) Every class must contain a main() method

   b) Applets do not require a main() method at all

   c) There can be only one main() method in a program

   d) main() method must be made public

12. What is false about constructor?

   a) Constructors cannot be synchronized in Java

   b) Java does not provide default copy constructor

   c) Constructor can have a return type

   d) "this" and "super" can be used in a constructor

13. Which of these access specifiers must be used for main() method?

   a) private   **b) public**

   c) protected   d) none of the mentioned

14. Which one of the following is not an access modifier?

   a) Public   b) Private

   c) Protected   **d) Void**

15. 1. Arrays in Java are implemented as?

   a) class   **b) object**

   c) variable   d) none of the mentioned

16. What will be output of following code?

```
class access
 {
    public int x;
        static int y;
    void cal(int a, int b)
    {
        x += a ;
y += b;
    }
 }
  class static_specifier
```

```
    {
        public static void main(String args[])
        {
            access obj1 = new access();
            access obj2 = new access();
            obj1.x = 0;
            obj1.y = 0;
            obj1.cal(1, 2);
            obj2.x = 0;
            obj2.cal(2, 3);
            System.out.println(obj1.x + " " + obj2.y);
        }
```

a) 1 2   b) 2 3

c) 3 2   **d) 1 5**

17. Which of these is supported by method overriding in Java?

    a) Abstraction   b) Encapsulation

    c) Polymorphism   d) None of the mentioned

18. Which of these keywords cannot be used for a class which has been declared final?

    a) abstract   b) extends

    c) abstract and extends   d) none of the mentioned

19. If a class inheriting an abstract class does not define all of its function then it will be known as?

    a) Abstract   b) A simple class

    c) Static class   d) None of the mentioned

20. Which of these is not a correct statement?

    a) Every class containing abstract method must be declared abstract

    b) Abstract class defines only the structure of the class not its implementation

    c) Abstract class can be initiated by new operator

    d) Abstract class can be inherited

21. How can a constructor be used for a servlet?

    a) Initialization   b) Constructor function

    c) Initialization and Constructor function d) Setup() method

22. Which of the following is the correct way of implementing an interface salary by class manager?

    a) class manager extends salary {}

b) class manager implements salary {}

c) class manager imports salary {}

d) none of the mentioned

23. Which of the following is an incorrect statement about packages?

   a) Interfaces specifies what class must do but not how it does

   b) Interfaces are specified public if they are to be accessed by any code in the program

   c) All variables in interface are implicitly final and static

   d) All variables are static and methods are public if interface is defined pubic

24. Which of these keywords is not a part of exception handling?

   a) try   b) finally

   c) thrown   d) catch

25. Which of these keywords must be used to handle the exception thrown by try block in some rational manner?

   a) try   b) finally

   c) throw   **d) catch**

26. What will be the output of the following code?

```
class exception_handling
  {
    public static void main(String args[])
    {
      try
      {
        int a, b;
        b = 0;
        a = 5 / b;
        System.out.print("A");
      }
      catch(ArithmeticException e)
      {
       System.out.print("B");
      }
    }
  }
```

   a) A   **b) B**

   c) Compilation Error   d) Runtime Error

27. Which Scanner class method is used to read integer value from the user?

a)next()   b)nextInteger()

c)nextInt()   d)readInt()

28. System class is defined in ………

a) java.util.package   **b)java.lang.package**

c) java.io.package   d) java.awt.package

29. Which of these class contains the methods used to write in a file?

a) FileStream   **b) FileInputStream**

c) BUfferedOutputStream   d) FileBufferStream

30. Which of these methods is used to write() into a file?

a) put()   b) putFile()

c) write()   d) writeFile()

Group B

Answer any 5 out of 8 questions.   5 * 6 = 8

1. What is loop in Java? What is the difference between for and while-do loops? Explain With a popper example.
2. Caesar's Code is one of the simplest encryption techniques. Each letter in the plaintext is replaced by a letter some fixed number of position (n) down the alphabet cyclically. In this exercise, we shall pick n=3. That is, A is replaced by D, B by E, C by F, X by A , ….. Z by C.Write a program called CaesarCode to cipher the Caesa's code. The program shall prompt the user for a plaintext string consisting of mix-case letters only; compute the ciphertext; andprint the ciphertext in uppercase.
3. Write a java program to reverse a word entered by the user.
4. What is Array in Java? What is its type explained with a simple example?
5. What are the different phases in the life cycle of servlet?
6. What is an exception? Explain its types.
7. Write a Java Program to print the following pattern.

1 1 1 1 1

2 2 2 2

3 3 3

4 4

5

8. Write a Java Program to calculate area of a circle. Allow the user to input the value of radius.

Answer any two out of three   20 * 2 = 40

1. Explain History of Java in brief . List down some of the advantages of using Java. Explain 5 basic features of object oriented programming with examples of each in Java.

2. Create a class called Student to represent a student. A Student should include four pieces of information as instance variables: a student name, a roll number, a semester and an address. Your class should have a constructor that initializes the four instance variables. Provide a mutator method and accessor method (query method - getter and setter) for each instance variable. In Addition, provide a method named getStudnetInfo that returns the description of the student as a String (the description should include all the information about the book). Write Program to get input of student from user and later display the information entered by user

3. Write Short Notes on following : (any four)
   a) Method overriding
   b) Variable in Java
   c) For Each Loop with example
   d) doGet and doPost method in Servlet
   e) Session Tracking