

# JAVA

## ⇒ IMPORTANT POINTS

Java is a high level programming language (initially called OAK) developed by James Gosling

- Byte Code is designed to be executed at runtime by Java Virtual Machine (JVM)
- Java is pure (100%) OOPS programming language
- To run a Java application it requires JRE (Java Runtime Environment)
- Java is extension for Java program
- Java doesn't consist of pointers, go to statement and multiple inheritance.
- Java support four "4" access specifiers
  - 1) Private
  - 2) Public
  - 3) Protect
  - 4) default
- Mark & Sweep is an algorithm used by garbage collector to delete unused variables and object from memory.
- In Java object cannot exist without class but a class can exist without any object.
- Java does not contain header files.
- There are 4a reserved key words in Java language
- J.L (Java Language) supports 3 types of comments.
  - 1. /\* comment \*/ multi line
  - 2. // comment single line
  - 3. /\*\* comment 1 comment 2 comment 3 Java documentation

Comment h \* /. This is known as documentation comment usually used in html files.

## Separators.

Symbol	Purpose
( )	Expression control statements
{ }	Block of code classes, methods and local scopes
[ ]	dereferencing array values
;	terminating statement
.	separate packes from subpackages and classes, method from a variable
,	reference identifiers

Hash Code : It is a unique identification number allocate to objects by the JVM

- Java is case sensitive language
- Unique code system : It is a system to indicate all the alphabates from all human languages (including characters)
- Java virtual machine (JVM) is system dependent.
- With the help of SUPER keyword we can derive variables and method from base class.
- Object code is machine code is equivalent of source code.

## ECET(CSE - II)

- Coercion : It is automatic conversions between different data types done by the compiler.
- In java all variables are in " Heap" memory.
- Method over riding : Writing two or more methods in super and sub classes such that same name and same signature.
- 1 The processes of assigning smaller type into larger is known as widening or promotion.
- The process of assigning larger type into smaller is known as narrowing
- Type casting : Converting one type of data type another data type and it is also known as casting.
- "escape sequences " in Java
  - \r Enter key
  - \b back space
  - \f from field
  - \\" displays slash
- Float can represent upto seven digits quarterly after decimal point where as double an represent upto 15 digits.
- dot operator (.) is also known as member operator
- Priority of operator :
  - 1) ( ), //
  - 3) \*, /, %
  - 5) Relational operators
  - 7) Logical
  - 9) Assignment
  - 2) +++, --
  - 4) +, -
  - 6) Boolean and Bitwise
  - 8) ternary
- String is a class it's not a data type
- Jagged array is an array that contains a group of array with in it.
- Runtime errors : The errors that occur
- Boxing : Converting a primitive datatype in to objecting
- Character wrapper class which contains only one constructor.
- JAR : Java Archive file
- Generalization is phenomenon where a sub class is promoted to a super class
- Specialization is phenomenon where super class is narrow down to sub class
- Static polymorphism is polymorphism executed at compile time.
- Positive numbers are represented using one's complement used negative numbers are represented by using two's complement internally.
- System : exit (0) terminates the program normally
- System. exit (1) terminates the program because of sum error encountered in the program
- Return statement is used to come out of it
- Default priority of thread is 5
- Maximum priority of thread is 10
- Minimum priority of thread is 1
- By default "Main thread" always runs in a java program.

**ECET(CSE - II)**

- Threads are called "light-weight" because they utilize minimum resources of the system, that means they take less memory and less processor time.
- Executing only one job at a time is called single tasking
- Executing several jobs at a time is called multi tasking
- Threads are mainly used in server-side programs
- We can create the threads by two ways
  - i) extends threads class
  - ii) implements Runnable interface
- **Ex :** Class myclass extends Thread  
Class myclass implements Runnable
- **To stop the thread :**  
First of all, we should create a boolean type variable which stores "False" when the user wants to stop the thread, we should store "true" in to the variable. The status of the variable checked in the run ( ) method and if it is true, the thread executes 'return' statement and then stops.
- 'extends thread' and implements Runnable'
  - \* Both are functionally same
  - \* When we write the extend thread, there is not scope to extend another class, as multiple inheritance is not supported in java.
- **Eg :** Class Myclass extends Thread, another class //invalid
- If we write implements Runnable, then still there is a scope to extend another class.
- **Ex :** Class Myclass extends another class implements Runnable valid.
- Public void run ( ) method is executed by the thread by default,
- When a thread is already acting on an object, preventing any other thread from acting on the same object called as "thread synchronization" or "thread safe"
- The object on which the threads are synchronized is called "synchronized object"
- Thread synchronized is recommended when multiple threads are used on the same object (in multi threading)
- Synchronized block is useful to synchronize a block of statements.
- Synchronized keyword is useful to synchronize an entire method.
- To test the thread is still alive (t. is Alive ( ) return T/F)
- To weight a thread dies [t. join ( ) ;]
- When a thread has locked an object and waiting for another object to be released by another thread, and the other thread is also waiting for the first thread to release the first object, both the threads will continue for ever. "This is called" thread deadlock"
- Obj. notify ( ) : - This method releases an object and sends a notification to a waiting thread that the object is available.
- **Obj. notify All ( ) :** To send the notification to all waiting threads at once that the object is available.
- **Obj. wait ( ) :** - This method makes a thread wait for the object till it receives a notification from a notify () (or) notify all ( ) methods.

## ECET(CSE - II)

- Sleep ( ) & Wait ( ) :

Both are used to suspend a thread execution for a specified time.

Generally sleep ( ) is used for making a thread to wait for same time.

But wait ( ) is used in connection with notify ( ) or notify all ( ) methods in thread communication.

## Thread Life Cycle

## Visibility of Fields in a class :

	Public Private	Protected	Default	Protected Private	
Some Class	Yes	Yes	Yes	Yes	Yes
Sub class in same package	Yes	Yes	Yes	Yes	No
Other classes in same package	Yes	Yes	Yes	No	No
Sub class in other package	Yes	Yes	No	Yes	No
Non-sub class in other package	Yes	No	No	No	No

Primitive data type	Corresponding wrapper class
Char	Character
byte	Byte
Short	Short
int	Integer
long	Long
float	Float
double	Double
boolean	Boolean

- Character has only one constructor which accept the primitive data type.
- The character wrapper class doesnot contain a construction with string as parameter.
- Byte wrapper class has two constructors :
  - 1) Number parameter
  - 2) String type parameter
- Short class contains two constructors
  - 1) number
  - 2) string
- Integer class contains two constructors
  - 1) number
  - 2) string
- Long class contains two constructors

- 1) long number                    2) strings
- Float class contains three constructors  
1) float number                2) double number    3) string type
- Double class has two constructors  
1) double number              2) string type
- Boolean class has two constructors  
1) boolean number             2) string
- Converting primitive datatype into an object is called “Boxing”
- Converting an object into its corresponding primitive datatype is called unboxing
- Errors can't be handled by programmer.
- Exception is an run time error
- If exception occurs the programmer can do some thing to handle it.
- The exception that are checked at compile-time by the java compiler called as “**checked exceptions**”
- The exceptions that are checked by the JVM are called “**Unchecked Exceptions**”
- Throwable is a class that represent all errors and exceptions which many occur in java.
- Exception : Is the super class for all the exceptions in Java
- Throwable is the super class for exception
- An exception can be handled using try, catch and finally blocks
- It is possible to handle multiple exceptions using multiple catch blocks.
- Eventhough there is a possibility for several exceptions in try block, at a time only one exception will be raised.
- A single try block can be followed by several catch blocks.
- We cannot write a catch without a try block, but we can write a try without any catch book.
- It is not possible to inset some statements between try and catch.
- It is possible to write a try block within another try, they are called nested try blocks.
- **Throws clause** is used when the programmer does not want to handle the exception and throw it out of a method.
- **Throw clause** is used when the programmer wants to throw an exception explicity and wants to handle it using catch block.  
Hence throws and throw are contradictory
- Types in exceptions
  - i) Built - in exceptions
  - ii) User - defined exceptions

**Exception Class**

Arithmetic

arithmetic

Array Index out of Bounds

**Meaning**

thrown when an exceptional condition has occurred in an operation

thrown to indicate that an array has been accessed within illegal index.

Exception of	The index is either negative or greater than or equal to the size of the array
Class not found exception definition	This exception is raised when we try to access a class whose is not found
File not found exception	Raised when a file is not accessible or does not open
IO Exception	Thrown when an input -output operation failed or interrupted
Interrupted Exception	Thrown when a thread is waiting , sleeping or doing some processing, and it is interrupted
No Such field exception specified	Thrown when a class does not contain the field (or variable)
No such method exception	Thrown when accessing a method which is not found
Null pointer exception represents	Raised when referring to the member of a null object, null nothing
Number format exception numeric	Raised when a method could not convert a string in to a format
Runtime Exception	This represents any exception which occurs during run time
String Index out of either	Thrown by string class methods to indicate that an index is negative or greater
Bound exception	than the size of the string

**User - defined Exceptions :**

- Created by the programmers.
- Class my exception extends **exception** || checked exception (compiling time)
- Class My Exception extends **Null Pointer Exception** || Unchecked Exception (Run Time)
- We can re throw an exception from catch block to another class where it can be handled
- An interface contains only abstract methods. Which are all incomplete methods.
- It is not possible to create instance to interface
- We can create a reference variable to interface
- The reference variable of interface can hold information about which class implements the interface
- We can declare the methods in the interface those methods will become public abstract by default
- We can declare the variable those variable becomes "Public static final" by default
- The implementation of the interfaces will be done by the third party vendor (will implements in another classes)

Eg : Interface MyInter

```
{
    int a;
    int b;
    connect ();
    add ();
}
```

After Compilation

**ECET(CSE - II)****Interface MyInter**

```
{
    Public static final int a ;
    Public static final int b ;
    Public abstract connect() ;
    Public abstract add() ;
}
```

- An interface can extend another interface  
Eg : Interface my inter extends MyInter 1 P
- An interface can not implement another interface  
Eg : Interface MyInter implement myinter 1O
- It is possible to write a class with in an interface.
- Interfaces forces the implementation classes to implement all of its methods compulsory.
- Java compiler checks whether all the methods are implemented in the implementation classes or not
- A class can implement (not extend) multiple interfaces  
Eg : class myclass implements interface 1, interface 2.....  
Class myclass extends class 1 implements inter 1, inter 2
- An Abstract class is a class that contains '0' or more abstract methods
- An abstract method is a method without method body
- An abstract method is written when the same method has to perform different tasks depending on the object calling it.
- Package represents a directory that contains a related group of classes and interfaces.
- Applet = javabyte code + HTML page.
- An applet represents java byte code embeded in a webpage
- applet life cycle  
init(), start(), stop(), destroy().
- An applet born with init() method and starts functions with start(). to stop the applet, the stop() method is called and to terminate the applet completely from memory, the destroy() . called
- One applets are executed by a progress is called as **applet engine** which is similar to a virtual machine that exists inside the web browser at clientside.
- Hot Java is the first applet - enabled browser developed in java to support running of applets
- <APPLET> tag is used to insert applet into HTML page
- An applet can not run any executable program in the client machine.

**PREVIOUS ECET BITS**

2012

01. Which of the following Inheritance mechanisms is not supported in Java
- 1) Single level      2) Multiple level      3) Multi level      4) All the above

**SAIMEDHA**

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02. What is the output of the following given Java code :

```
public class Ecet {
    public static void main (string [] args) {
        new Ecet (). go ("hello", 1);
        new Ecet (). go ("hello", "word", 2);
    }
    public void go (string y, int x) {
        System.out.print (y[y.length-1] + " ");
    }
}
```

- 1) h. he                    2) hello world            3) world world            4) compilation fails

03. Which one of the following statements is TRUE ?

- 1) At once, more than two threads may possibly end up in deadlock.  
 2) The JVM implementation guarantees that multiple threads cannot enter into a deadlock state.  
 3) Deadlock threads release once their sleep ()method's sleep duration has expired  
 4) Deadlocking can occur only when the wait (), notify () , and notify All () methods are used incorrectly.

04. Fill up the blank with one of the following statements for the given Java code which allows Ecet class to compile:

```
class Navigation {
    class Navigation {
        public enum Direction {North, South, East, West}
    }
    public class Ecet {
    }
```

- 1) Direction d = North ;                    2) Navigation. Direction d = Navigation. Direction. North;  
 3) Direction d = Direction. North ;                    4) Navigation. Direction d = North ;

05. What is the output of the given Java code below ?

```
interface Test A ( String to String ( ) ; )
public class Test {
    public static void main (String [] args) {
        System.out.println(new TestA () {
            public String to String () {return "test";}
        });
    }
}
```

- 1) test                    2) null  
 3) An exception is thrown at runtime  
 4) Compilation fails because of an error in line 1

06. Given the following Java code, \_\_\_\_\_ can directly access and change the value of the variable name ?  
 package exam;

```
class Ecet {  
    public String name = "hello";  
}
```

- 2) only the Ecet class
  - 4) any class that extends Ecet

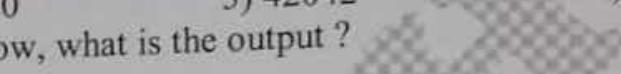
07. What is the output of the following Java code ?

```
public class EcetString1 {  
    public static void main (String [] args) {  
        String str = "420";  
        System.out.print(str);  
    }  
}
```

- 1) 42                  2) 420                  3) 42042

```
int a = 0;  
int b = 10;  
do {  
    b--;  
    ++a;  
}while (a<  
System.out  
1) 5,6
```

- 2) 420      3) 42042      4) 462  
e below, what is the output ?



2011

**09.** Which of the following types of class members can be part of the internal part of a class?

- 1) Private methods
  - 2) Public instance variables
  - 3) Private constructors
  - 4) Public methods

10. What is an example of polymorphism?

- 1) Method overloading
  - 2) Anonymous classes
  - 3) Inner class
  - 4) Method over riding

11. What is the result of executing the following fragment of code:

```
boolean  
flag = false ;  
if (flag = true)  
{System.out.println ("false") ;}  
else  
{System.out.println ("false");}
```

- 1) nothing happens
  - 2) an exception is raised
  - 3) true is printed to standard out
  - 4) false is printed to standard out

12. Which of the following is illegal;

- 1) float f = 45.0;      2) float f = 45.0      3) doubled = 45.0;      4) int i = 32;

13. Constructor is a method that determine how an object is



14. Which of the following wrapper classes cannot take a "String" in constructor? ) initialized when called

- 1) Long      2) Boolean      3) Character      4) Integer

15. Final variable should be declared in the

## ECET(CSE - II)

- 1) inside constructors      2) outside the methods  
 3) inside methods      4) inside classes
16. The Java Interpreter is used for the \_\_\_\_\_ of the source code.  
 1) debugging      2) execution      3) compiling      4) creation
17. Which one does not extend java.lang.Number?  
 1) Integer      2) Boolean      3) Short      4) Long
18. What will happen if you try to compile and run the following code? public class Q  
 {public static void main (String argv [])  
 {int anar [] = new int [5];  
 {System.out.println (anar [0]); }  
 1) Error      2) null      3) 5      4) 0
19. How can class be imported to a program ?  
 1) import "class name"  
 2) import "class name" + ;  
 3) import "class name";  
 4) import "class name".\*;
20. Which statement is true about a nonstatic inner class ?  
 1) it can access private instance variables in the enclosing object  
 2) it is accessible from any other class  
 3) it can only be instantiated in the enclosing class  
 4) it must implement an interface
21. Applets are executed generally in a  
 1) console      2) browser      3) server      4) network
22. Which one is a key word in a Java?  
 1) friend      2) size of      3) extends      4) NULL
23. What will be printed out if this code is run with the following command line ?  
 java my\_progr good morning  
 public class my\_prog  
 {public static void main (String argv [])  
 {System.out.println (argv [2]); }  
 1) my\_prog  
 2) exception raised : "java.lang.ArrayIndexOutOfBoundsException: 2"  
 3) moming      4) good

**2010**

24. Which of the following is a scalar data type ?  
 1) Array      2) Char      3) Struct      4) Union
25. Static variables in a function have  
 1) Global scope and global extent  
 2) Global scope and local extent  
 3) Local scope and global extent  
 4) Local scope and local extent
26. Which character encoding scheme is followed for the 'clear' datatype in Java ?  
 1) ASCII      2) EBCDIC      3) BCD      4) Unicode
27. \_\_\_\_\_ Operator is not a bit-wise operator :  
 1) >>>      2) >      3) >>      4) <<
28. Which of the following features in Java is not a keyword ?  
 1) Package      2) Volatile      3) Import      4) Null
29. Which of the following is the default access specifiers for class members ?  
 1) Public access  
 access      2) Private access      3) Protected access      4) Package

## **PREVIOUS ECET BITS KEY**

01) 3    02) 4    03) 4    04) 4    05) 4    06) 3    07) 3    08) 4    09) 1    10) 1  
11) 4    12) 1    13) 3    14) 2    15) 4    16) 2    17) 2    18) 4    19) 1    20) 4  
21) 2    22) 3    23) 2    24) 2    25) 3    26) 4    27) 2    28) 1    29) 2    30)  
|  
31) 3    32) 1    33) 3    34) 4    35) 4    36) 1

## PRACTICE SET - I

01. Consider the following class definition class A extends B

```
    public A (int x) { }
    public A (int x, int y)
{
    super (x,y);
}
```

Which of the following are legal statements to construct A-type objects?

- 1) \_\_\_\_\_ 2) \_\_\_\_\_

02. Which of the following are overloading the method int sum (int (intn inty)  
 3)                          4) both 2 and 3  
 1) ins sum (intx, int y, int z { }  
 2) float s um (int  
 x, int y) { }  
 3) int sum (int a, int b) { }                          4) both 2 and 3
03. Which key word can protect a class in a package from accessible by the classes outside the package  
 1) private                          2) protected  
 3) final                            4) don't use any keyword at all (make it default)
04. We would like to make a member of class visible in all subclasses regardless of what package they are in. Which one of the following keywords would achieve this  
 1) private                                  2) protected  
 3) public                                    4) private protected
05. A package is a collection of  
 1) classes                                  2) interfaces  
 3) editing tools                            4) classes and interfaces
06. What will be the output of the following program class Main1  

```
{
public static void main ( String args [ ] )
{
boolean b = true ;
System.out.println ("XXX");
return
System.out.println ("YYY");
}
}
1) XXX                                          2) YYY
3) XXX followed by YYY                        4) Error, Won't complete
```
07. Which exception is thrown by the read ( ) method of input Stream class ?  
 1) Exception                                    2) File not Found Exception  
 3) Read Exception                              4) IO exception
08. A (n) .....is a software unit that combines a structured set of data with a set of operations for inspecting and manipulating that data  
 1) Class                                        2) Object                                  3) Method                                  4) Signature
09. A(n) ....is a blueprint for objects, which defines a type of object according to the data the object can hold and the operations the object can perform  
 1) class                                        2) object                                    3) method                                    4) signature
10. A class declaration is class designed with implementation gaps for sub-classes to fill in  
 1) C     2) Pascal                                    3) Fortarn                                    4) PL/SQL
11. Which of the following events will cause a thread to die  
 1) the method sleep ( ) is called            2) the method wait ( ) is called  
 3) Execution of the start ( ) method ends    4) Execution of the run ( ) method ends
12. Given three classes A,B and C, where B is a subclass of A and C are subclasses of B.  
 Which one of these boolean expressions correctly identifies when an object O has actually been instantained from class B as opposed to from A or C

Choose the correct statement

- 1) This program will not compile successfully because the local variable var is used without being assigned a value.  
 2) The value of var that is printed is an unpredictable garbage value  
 3) The value of var that is printed is 0  
 4) The value of var that is printed is compiler dependent
24. The finally block is executed  
 1) only when a checked exception is thrown      2) only when an unchecked exception is thrown  
 3) only when an exception is thrown  
 4) irrespective of whether an exception is thrown or not.
25. What is the output of the following program ?  
 Public class Example App {  
 Public Static Void Magic (int x ) {  
 System.out.print ( x % 10 );  
 If ((x / 10 != 0)  
 Magic (x / 10 );  
 System.out.println (x % 10 );  
 }  
 Public static void main (string [] args) {  
 Example App. Magic (2357);  
 }
- 1) 2357      2) 75322357      3) 7532      4) Runtime error
26. The statements  
 byte var = -9 ;  
 system.out.println (var);  
 1) prints - 9      2) prints - 10      3) prints - 119      4) prints 118
27. How many #'s do the following statement print ?  
 For (int m = 0, n = 10, n - m > 5 ; ++ m, -- n)  
 system.out.print ("#");  
 1) 2      2) 4      3) 1      4) 3
28. The statement  
 System. OUT. print ((double 7/4) ;  
 1) 1.75      2) 1.0      3) 1      4) 2.0
29. When writing comments you can  
 1) use code /\* comment on the same line  
 3) use code and // \* comments on the same line  
 4) use code and < ! - comments on the same line  
 2) use code // comments on the same line
30. In java the Exceptions that are expected to possibly occur are called  
 1) unchecked exceptions      2) checked exceptions  
 3) erroneous exceptions      4) runtime exceptions
31. In Java the default value for float is  
 1) 10      2) 0.0      3) garbage value      4) None
32. Which of the following is a valid variable declaration in java  
 1) int 9 elements      2) int 4932      3) int elements      4) None
33. Package members are accessible outside the package if they are  
 1) private      2) Public      3) protected      4) None

## ECET(CSE - II)

34. In which package the class is stored if package name is not mentioned.  
 1) global package      2) by default package      3) default package      4) None
35. The result of a Relational operation is always  
 1) either True or False      2) is less than or is more than  
 3) is equal or less or more      4) All the above
36. The keyword used to declare constants in Java  
 1) constant      2) const      3) Final      4) None
37. Which of the following is not a Boolean operator  
 1) &&      2) !      3) !=      4)
38. JVM stands for  
 1) Java Vertical Mechanism      2) Java Virtual Machine  
 3) Java Virtual Mechanism      4) None of the above
39. In Java garbage collection runs as  
 1) a max - priority thread      2) a medium - priority thread  
 3) a low - priority thread      4) None
40. JVM plays a key role in making Java  
 (1) Robust      2) High performance      3) Portable      4) None
41. Which of the following doesn't have a super class  
 1) Lang      2) system      3) Object      4) Exception
42. What exception is created by the following code?  
`int a,b,c ; a = 7, b = 0 ; c = a/b ;`  
 1) Arithmetic Exception      2) Null Pointer Exception  
 3) 10 Exception      4) Out of Memory Exception
43. Static variables of a class are also known as  
 1) instance variables      2) class variables      3) simple variables      4) None
44. Which of the following method is called exactly once in an Applet life cycle ?  
 1) init ()      2) destroy ()      3) both 1 and 2      4) None
45. An Applet is  
 1) run and delivered as a java byte code  
 2) run and executed in a container where it is deployed  
 3) both 1 and 2      4) none of the above
46. Servelets are executed in JVM by a service called  
 1) Servlet container      2) Servlet engine      3) Servlet tracker      4) None of the above
47. The following program segment prints \_\_\_\_  
`byte var = ~ 34 ;`  
`system.out.print ln (var) ;`  
 1) -94      2) -33      3) -35      4) 93
48. What does the statement  
`import java.util * ; import ;`  
 1) All the methods in the class java.util      2) All the classes in the package java.util  
 3) All the packages starting with java.util      4) None
49. Which of the following methods is invoked by garbage collector  
 1) finally      2) constructor      3) finalize      4) destructor
50. Which of the following can be used to generate HTML documentation from Java source code ?

51. 1) java HTML doc      2) Javadoc      3) jar      4) java C  
     The Java compiler generates code in  
     1) byte code 2) OP - code      3) Machine-language  
     language      4) assembly
52. If the member variable of a class is to be shared by all the objects that class, it should be declared  
     1) volatile      2) public      3) final      4) static
53. The statement  
`system.out.printin (-34>>2);`  
     1) prints - 36      2) prints -136      3) prints 136      4) prints - 9
54. Which of the following statements is valid ?  
     statement 1 : float m1 = 2.1 ;  
     statement 2 : double m2 = 2.1;  
     statement 3 ; long m3 = 2.1 ;  
     1) statement 1 & 2      2) statement 2      3) statement 7      4) none
55. Which of the following operator work with variables but not literals ?  
     (A) ++ ( pre - increment)      (B) ++ (post- inc)  
     (C) >>      (D) no such operator exists  
     1) A and B      2) A only      3) C only      4) D
56. The statements int m = 9, n= 5, P =3 ;  
`system.out.print ((m -m/n * n% p) > (m%n%p));`  
     1) prints true      2) prints 0      3) prints false      4) prints non-zero
57. Which of the following is not a keyword in Java?  
     1) Super      2) Volatile      3) this      4) pointer
58. The statement can be replaced by the statement  
     1)      2)      3)      4)
59. Which of the following can be declared final  
     (A) A class      (B) A method      (C) A member variable  
     1) A and B      2) A and C      3) All the above      4) None
60. Which of the following cannot be used as identifier?  
     1) Letter      2) Digits      3) underscores      4) spaces
61. The concept of multiple inheritance is implemented in Java by  
     1) extending two or more classes  
     2) extending one class and implementing one or more interfaces  
     3) implementing two or more interfaces      4) Both 2 and 3
62. We would like to make a member of a class visible in all subclasses regardless of what package they are in. Which one of the following keywords would achieve this?  
     1) private      2) protected  
     3) private OR protected      4) public
63. Which of the following are valid statements  
     1) public class MyCalc extends Math  
     3) Math.round(9.99,1);      2) Math.max(s);  
     4) None of the above.
64. Which of the following are true?  
     1) The Void class extends the Class class.  
     2) The Float class extends the Double class.



79. 1) The double value 8.6  
3) The long value 8.  
What is the value of a[3] as the result of the following array declaration?  
1) 2                    2) 3                    3) 1                    4) 4

80. You would use the \_\_\_\_\_ operator to create a single instance of a named class.  
1) new                    2) dot                    3) equal to                    4) none of the above

81. You can explicitly drop an object reference by setting the value of a variable whose data type is a reference type to \_\_\_\_\_.  
1) null                    2) object                    3) class                    4) method

82. What are all the methods available in the Thread class?  
1) isAlive()                    2) join()                    3) resume()                    4) suspend()

83. Which of the following statements correctly describes an interface?  
1) It's a concrete class                    2) It's a superclass  
3) It's a type of abstract class                    4) none of the above

84. All the classes in a package can be simultaneously imported using \_\_\_\_\_.  
1) =                    2) \*                    3) dot                    4) new

85. When might your program wish to run the garbage collector?  
1) before it enters a compute-intense section of code  
2) before it enters a memory-intense section of code  
3) when it knows there will be some idle time  
4) All the above

86. Which of the following types of class members can be part of the internal part of a class?  
1) Public instance variables                    2) Private instance variables  
3) Private methods                    4) both 1 and 3

87. What is the range of the char type?  
1) 0 to 216                    2) 0 to 215                    3) 0 to 216-1                    4) 0 to 215-1

88. Because finalize() belongs to the java.lang.Object class, it is present in all \_\_\_\_\_.  
1) objects                    2) classes                    3) methods                    4) All the above

89. Which of the following methods are methods of the Math class?  
1) absolute()                    2) log()                    3) cosine()                    4) sine()

90. What will happen if you attempt to compile and run the following code?  
Integer ten=new Integer(10);  
Long nine=new Long(9);  
System.out.println(ten + nine);  
int i=1;  
System.out.println(i + ten);  
1) 19 followed by 20                    2) 19 followed by 11  
3) Error: Can't convert java.lang.Integer                    4) 10 followed by 1

91. The use of protected keyword to a member in a class will restrict its visibility as follows:  
1) Visible in all classes in the same package and subclasses in other packages.  
2) Visible only in the class and its subclass in the same package.  
3) Visible only inside the package.  
4) Visible only in the class where it is declared.

92. Package p1 contains the following code:  
package p1;

- public class Student  
 1) Class result should be declared public.  
 3) Student class is not available.
93. Which of the following are keywords?  
 1) switch & default      2) integer & byte      3) Boolean      4) object & class
94. Consider the following code:  
 interface Area  
 1) Method compute() in class Room should be declared public  
 2) Interface definition is incomplete  
 3) Method compute() in interface Area should be declared public  
 4) All of these
95. Which of the following will output -4.0  
 1) System.out.println(Math.floor(-4.7));  
 2) System.out.println(Math.round(-4.7));  
 3) System.out.println(Math.ceil(-4.7));  
 4) System.out.println(Math.Min(-4.7));
96. Which of the following methods are methods of the String class?  
 1) delete( )      2) append( )      3) reverse( )      4) replace( )
97. What is the method available for setting the priority?  
 1) getPriority( )      2) setPriority( )      3) Both 1 and 2      4) none
98. What is an example of polymorphism?  
 1) Inner class      2) Anonymous classes  
 3) Method overloading      4) Method overriding
99. Which of the following can be referenced by this variable?  
 1) The instance variables of a class only      2) The methods of a class only  
 3) The instance variables and methods of a class  
 4) none of the above
100. Which method is used to garbage collect an object?  
 1) finalize( )      2) get( )      3) throw( )      4) sleep( )

### PRACTICE SET - I KEY

01) 4	02) 4	03) 4	04) 4	05) 4	06) 3	07) 4	08) 2	09) 1	10) 1
11) 4	12) 2	13) 3	14) 1	15) 2	16) 2	17) 1	18) 4	19) 1	20) 1
21) 4	22) 3	23) 1	24) 4	25) 2	26) 2	27) 4	28) 1	29) 4	30) 2
31) 2	32) 3	33) 2	34) 3	35) 1	36) 3	37) 3	38) 2	39) 3	40) 3
41) 3	42) 1	43) 2	44) 3	45) 1	46) 2	47) 3	48) 1	49) 3	50) 2
51) 1	52) 4	53) 4	54) 2	55) 1	56) 1	57) 4	58) 2	59) 3	60) 4
61) 4	62) 3	63) 4	64) 4	65) 1	66) 4	67)	68) 4	69) 1	70) 1
71) 4	72) 4	73) 3	74) 1	75) 3	76) 4	77)	78) 4	79) 4	80) 1
81) 1	82) 1	83) 3	84) 2	85) 4	86) 4	87) 4	88) 2	89) 3	90) 3
91) 1	92) 2	93) 1	94) 1	95) 3	96) 4	97) 2	98) 3	99) 3	100)

## PRACTISE SET - II

01. Which of the following defines a legal abstract class  
1) abstract vehicle {  
    abstract void display () ; }  
2) abstract class Vehicle {  
    abstract void supply () ; }  
3) class abstract vehicle {  
    abstract void supply () ; }  
4) none

02. The concept of multiple inheritance is implemented in Java by  
1) extending two or more classes  
2) extending one class and implementing one or more interfaces  
3) implementing two or more interfaces  
4) both 2 and 3

03. Which of the following statements are valid array declaration  
1) int number ( ) ;  
2) float average [ ] ;  
3) double [ ] marks ;  
4) both 2 and 3

04. Consider the following code  
int number [ ] = new int [ 5 ] ;  
After execution of this statement, which of the following are true ?  
1) number [5] is undefined  
2) number [2] is 0  
3) number length ( ) is 5  
4) all the above

05. What will be the content of array available table after executing the following code  
for (int i = 0 ; i < 3; i ++)  
for (int j = 0, j < 3; j ++)  
if (j == i) table [i] [j] = 1;  
else table [i] [j] = 0;  
1) 2) 3) 4)

06. .....Class is a class designed with implementation gaps for sub-classes to fill in  
1) An instance  
2) An abstract  
3) A class  
4) None of the above

07. The keyword gives a class explicit access to the constructors, methods, and variables of its second arguments  
1) final  
2) super  
3) instance of  
4) implicit

08. ....is a class defined in the java lang package, whereas it is primitive data type defined in the Java language  
1) int  
2) float  
3) char  
4) integer

09. Which of the following is not a reserved keyword in Java  
1) abstract  
2) boolean  
3) break  
4) count

10. In a method invocation, does java pass  
1) arguments by reference  
2) arguments by value  
3) arguments by pointer  
4) arguments by variable

11. Which one of the following methods must a subclass of Applet implement  
1) destroy ()  
2) init ()  
3) start ()  
4) none of the above

12. Which of the following methods are never run by the applet context  
1) destroy ()  
2) init ()  
3) main ()  
4) stop ()

13. Java Virtual Machine is an interpreter for byte code  
1) True  
2) False

14. When Java source code is completed, each individual class is put into its own output file named after the class and using the \_\_\_\_\_ extension

- |     |   |                            |                                |                  |             |
|-----|---|----------------------------|--------------------------------|------------------|-------------|
| 15. | Java in Case _____  | 1) h                       | 2) java                        | 3) >java         | 4) .class   |
| 16. | The Java interpreter is used for the _____ of the source code   | 1) Sensitive               | 2) In-sensitive                | 3) Compiling     | 4) Creation |
| 17. | Which one does not extend java.lang.Number  | 1) debugging               | 2) Execution                   | 3) Short         | 4) Long     |
| 18. | What will happen if you try to compile and run the following code   | 1) Integer                 | 2) Boolean                     | 3) Short         | 4) Long     |
|     | Public class  |                            |                                |                  |             |
|     | { Public static void main (string argv [ ])   |                            |                                |                  |             |
|     | { int anar [ ] = new int [5];   |                            |                                |                  |             |
|     | system.out.printLn(anar[0]); }  |                            |                                |                  |             |
|     | 1) Error  | 2) null                    | 3) 5                           | 4) 0             |             |
| 19. | How can class be imported to a program  | 1) import "class name";    | 2) import "class name" *;      | 3) 5             | 4) 0        |
|     | 3) import "class name" ;  | 4) import "class name: *"; |                                |                  |             |
| 20. | Applets are executed generally in a   | 1) Console                 | 2) Browser                     | 3) Server        | 4) Network  |
| 21. | What is the O/P of the following program ?  |                            |                                |                  |             |
|     | Public class ExampleApp {   |                            |                                |                  |             |
|     | Public static void main (string [ ] args) {   |                            |                                |                  |             |
|     | Int a = 1, b = 13 ;   |                            |                                |                  |             |
|     | If (( b < (a = a + a)) (b < (a = a + a))  |                            |                                |                  |             |
|     | (b < (a = a + a)) (b < (a = a + a))   |                            |                                |                  |             |
|     | system.out.println(b - a);  |                            |                                |                  |             |
|     | else  |                            |                                |                  |             |
|     | system.out.println(b + a);  |                            |                                |                  |             |
| 22. | 1) compilation error  | 2) 14                      | 3) 16                          | 4) none of these |             |
|     | Which of the following comments about the program counter (PC) are true ?   |                            |                                |                  |             |
|     | (A) It is a register  |                            |                                |                  |             |
|     | (C) During execution of the current instruction, its content changes  |                            |                                |                  |             |
|     | 1) A and B  | 2) A and C                 | 3) only A                      | 4) None          |             |
| 23. | The difference between and is   |                            |                                |                  |             |
|     | 1) The first one refers to a variable whose identifier is and the second one refers to the character constant               |                            |                                |                  |             |
|     | 2) The first one is a character constant and second one is the string literal   |                            |                                |                  |             |
|     | 3) Both are same  |                            | 4) None of the above           |                  |             |
| 24. | What is the environment variable that contains a list of directories where Java looks for classes referenced in a program ? |                            |                                |                  |             |
|     | 1) PATHCLASS  | 2) SEARCHCLASS             |                                |                  |             |
|     | 4) CLASSPATH  |                            |                                | 3) PATHDIR       |             |
| 25. | Regarding the use of new line character (/n) and endl manipulator with cout statement                                       |                            |                                |                  |             |
|     | 1) Both ways are exactly same   |                            |                                |                  |             |
|     | 3) Both are similar but endl additionally performs flushing of buffer   |                            | 2) endl can't be used with out |                  |             |

- 4) /n can't be used with cout.

26. Which of the following are Java variables type  
 (A) instance variable      (B) local variables  
 (C) class variable      (D) None of the above  
 1) A and C      2) A,B and C      3) A and B      4) D

27. Constructor is called  
 1) When the class is declared      2) when the object of class is created  
 3) when the class is defined      4) none of the above

28. Which of the following is not a type of exception  
 1) runtime      2) checked      3) unchecked      4) routine

29. The main thread of Java program is controlled by  
 1) a thread class      2) an object of thread class  
 3) an object of main thread itself      4) None

30. In Java the Exception class is a subclass of  
 1) Error class      2) Throwable class      3) System class      4) None of the above

31. A class variable is a variable that is declared inside a class as  
 1) Static      2) abstract      3) final      4) extends

32. In threads  
 1) a lower priority thread can pre-empt a higher priority thread      4) none  
 2) a higher priority thread can pre-empt a low priority thread  
 3) no thread can be pre-empted

33. \_\_\_\_\_ class is used for creating string objects which are to be changed  
 1) string      2) string buffer      3) both 1 and 2      4) None

34. To promote encapsulation, Java provides on access modifier  
 1) protected      2) private      3) public      4) none

35. Which of the following packages is imported by default?  
 1) java. lang      2) java. io      3) java. text      4) java. math

36. What does the statement  
`System.out.println( ++ 5); print ?`  
 1) 6      2) 5      3) Results in a compilation error      4) Results in Runtime error

37. How many concrete classes can you have inside an interface?  
 1) 4      2) 3      3) 1      4) None

38. Which of the following statements accurately describe the use of access modifiers within a class definition?  
 1) They can be applied to both data & methods      4) All of the above  
 2) They must precede a class's data variables or methods  
 3) They can appear in any order

39. Which of the following are primitive types?  
 1) byte      2) String      3) integer      4) Float

40. What are all the methods used for Inter Thread communication and what is the class in which these methods are defined?  
 1) wait()      2) notify()      3) notifyall()      4) All the above

41. If you run the code below, what gets printed out?  
`String s=new String("Bicycle");`

ECET(CSE - II)

```
int iBegin=1;
char iEnd=3;
System.out.println(s.substring(iBegin,iEnd));      3) icy
        2) ic
        1) Big
        0) s.charAt(0)
        -1) s.charAt(-1)
```

42. int iBegin=1;  
char iEnd=3;  
System.out.println(s.substring(iBegin,iEnd));  
1) Bic  
method matching substring(int,char)  
Which of the following statements about abstract methods/classes in Java are true?  
1) An abstract class cannot be instantiated.  
3) A subclass of an abstract class must define the abstract methods.  
4) Both 1 and 2

43. What is meant by "Passing by value" and "Passing by reference"?  
1) objects - pass by reference ; Methods - pass by value  
2) Method - pass by reference ; Objects - pass by value  
3) class - pass by value ; Objects - Pass by reference  
4) None of the above

44. Which of the following statements correctly describes the relation between an object and the instance variable it stores?  
1) Each new object has its own distinctive set of instance variables  
2) Each object has a copy of the instance variables of its class  
3) the instance variable of each object are separate from the variables of other objects  
4) All the above

45. The this reference is used in conjunction with \_\_\_\_\_ methods.  
1) static  
above  
2) non-static  
3) final  
4) none of the above

46. What are the values of x and y?  
x = 5; y = ++x;  
1) x = 5 ; y = 5  
2) x=6 ; y = 5  
3) x=5 ; y=6  
4) x = 6 ; y = 6

47. Which keyword is used to create an instance of a class?  
1) object  
2) new  
3) final  
4) friend

48. What is the output of the following program?  
public class Question {  
public static void main(String args[]) {  
String s1 = "abc";  
String s2 = "def";  
String s3 = s1.concat(s2.toUpperCase());  
System.out.println(s1+s2+s3);  
}  
}  
1) abcdefabcdef  
2) abcabcDEFDEF  
3) abcdefabcDEF  
4) None of the above

49. Which Java operator is right associativity?  
1) \*  
2) /  
3) +  
4) =

50. Which of the following are true?  
1) The Class class is the superclass of the Object class.  
2) The Class class can be used to load other classes.  
3) The ClassLoader class can be used to load other classes.  
4) both 2 and 3

51. Which of the following not declare an array of string objects?

52. 1) String[ ] s;      2) String [ ]s:      3) String[ s]:      4) String s[ ]:  
 What are the values of x and z?  
 x = 5; z = x++;  
 1) x = 6 ; z = 6      2) x = 5 ; z = 6      3) x = 6 ; z = 5      4) x = 5 ; z = 5
53. Which priority Thread can prompt the lower primary Thread?  
 1) Lower Priority      2) Higher Priority  
 3) Normal Priority      4) none
54. Which of the following keywords are used to control access to a class member?  
 1) public      2) abstract      3) protected      4) All of the above
55. Package p1 contains the following code:  
 package p1;  
 public class Student  
 1) Class result should be declared public.  
 3) Student class is not available.  
 2) Test class is not available.  
 4) Result body is not fully defined.
56. A package is a collection of  
 1) classes      2) classes and interfaces  
 3) interfaces      4) editing tools
57. The concept of multiple inheritance is implemented in Java by  
 1) extending two or more classes  
 2) extending one class and implementing one or more interfaces  
 3) implementing two or more interfaces      4) Both 2 & 3
58. What are the constants defined by both Float and Double classes?  
 1) MAX\_RADIX      2) MIN\_RADIX  
 3) MAX\_VALUE      4) MIN\_VALUE and TYPE.
59. Given the following declarations  
 String s1=new String("Hello")  
 String s2=new String("there");  
 String s3=new String();  
 Which of the following are legal operations?  
 1) s3=s1 + s2      2) s3=s1 - s2      3) s3=s1 & s2      4) s3=s1 && s2
60. Which of the following is not a wrapper class?  
 1) String      2) Integer      3) Boolean      4) Character
61. Garbage collector thread belongs to which priority?  
 1) High priority      2) low-priority      3) normal priority      4) none of these
62. What are the possible access modifiers when implementing interface methods?  
 1) Protected      2) Private      3) public.      4) none
63. Which of the following methods is used to get the error message for the exception that was thrown ?  
 1) print message      2) extract message      3) thrown message      4) get message
64. Java is a  
 1) course      2) Iseland      3) Subject      4) None
65. Java runs on  
 1) windows      2) Unix/linux      3) Mac      4) All of the above

PRACTICE SET - II KEY

01) 2	02) 4	03) 4	04) 4	05) 4	06) 2	07) 3	08) 4	09) 4	10) 2
11) 4	12) 3	13) 1	14) 2	15) 1	16) 2	17) 2	18) 4	19) 1	20) 2
21) 1	22) 2	23) 1	24) 4	25) 3	26) 2	27) 2	28) 4	29) 2	30) 2
31) 1	32) 2	33) 2	34) 2	35) 1	36) 3	37) 4	38) 4	39) 1	40) 4
41) 2	42) 4	43) 1	44) 4	45) 2	46) 4	47) 2	48) 3	49) 4	50) 4
51) 3	52) 3	53) 2	54) 4	55) 2	56) 2	57) 4	58) 1	59) 1	60) 1
61) 2	62) 3	63) 4	64) 2	65) 4					

### PRACTISE SET - III

01. Which of the following classes are available in the java. lang package  
1) math                    2) string                    3) string buffer                    4) all the above

02. Which of the following are the wrapper classes  
1) byte                    2) integer                    3) short                            4) all the above

03. Which of the following methods belong to the string class  
1) length ()                    2) compare to ()                    3) Equals                            4) all the above

04. Given the code  
String s1 = "yes"  
String s2 = "yes"  
String s3 = new String (s1);  
Which of the following would equate to true ?  
1) s1 = s2                    2) s3 equals (s1)                    3) s3 equals (s1)                    4) all the above

05. Given the following code  
class Base {int x = 10 ;}  
class Derived extends Base  
{ int x = 20 ;}  
Base b = new base ();  
Derived d = new derived ();  
Base bd = new derived ();  
  
The statement  
System.out.println(b.x + " " + d.x + " " + bd.x);  
will produce the output  
1) 10 20 20                    2) 10 20 10                    3) 20 10 20                    4) 20 20 10

06. Consider the following code snippet

```
try {  
    int x = 0;  
    int y = 50/x ;  
    System.out.println("Division by zero') ;  
    System.out.println ("Catch block');  
}
```

- .....  
.....
- What will be the output  
 1) Error. Won't compile  
 2) Division by zero  
 3) Catch block  
 4) Division by zero Catch block
07. An.....is a Java compatible program that you can embed in a web page  
 1) javap  
 2) applet  
 3) servlet  
 4) tag
08. A class from which another class derived  
 1) Subclass  
 2) Derived class  
 3) Child class  
 4) all the above
09. A class from which other classes are derived  
 1) Base class  
 2) Parent class  
 3) Super class  
 4) all the above
10. Which of the following array declaration and instantiation are not legal  
 1) int [ ] a [ ] = new int [4] [4] ;  
 2) int a [ ] [ ] = new int [4] [4] ;  
 3) int a [ ] [ ] = new int [ ] [4] ;  
 4) int [ ] a [ ] = new int [4] [ ] ;
11. Given a variable x of type int (which may contain a negative value), which of the following are correct ways of doubling type value of x  
 1) x << 1;  
 2) x = x \* 2;  
 3) x \* = 2;  
 4) both 2 and 3
12. Which of the following methods is executed first when an applet is run  
 1) destroy ()  
 2) init ()  
 3) main ()  
 4) stop ()
13. What does J2SE mean ?  
 1) Java 2 Platform Standard Edition  
 2) Java 2 Internet Standard Edition  
 3) Java 2 Platform Independent Standard Edition  
 4) Java 2 Systems Edition
14. An interface contains \_\_\_ methods  
 1) Non-abstract  
 2) Implemented  
 3) unimplemented
15. Given the following declarations  
 String s1 = new String ("Hello")  
 String s2 = new String ("there");  
 String s3 = new String () ;  
 Which of the following are legal operations ?  
 1) s3 = s1 + s2 ;  
 2) s3 = s1 - s2 ;  
 3) s3 = s1 & s2  
 4) s3 = s1 & & s2
16. Which one is a key word in Java ?  
 1) Friend  
 2) Size of  
 3) extends  
 4) Null
17. What will be printed out if this code is run with the following command line ?  
 Java my-prog good morning  
 Public class my - prog  
 {Public static void main (string argv [ ])  
 {system.out.println (argv [2])}
18. Which character encoding scheme is followed for the "char" datatype in Java ?  
 1) ASCII  
 2) EBCDIC  
 3) BCD  
 4) Unicode
19. \_\_\_\_\_ operator is not a bit-wise operator  
 1) >>>  
 2) >  
 3) >>  
 4) <<
20. Which of the following feature in Java is not a keyword ?

ECET(CSE - II)

- ECET(CSE - II)**

21. Which of the following operations in Java has the highest precedence than the other  
1) package      2) volatile      3) import      4) Null  
operator ?

22. Which of the following ways of declaring and initialization a 1-dimensional integer array  
of size there is / are statically correct ?  
(A) int [ ] var = {1, 5, 6} ;      (B) int var [ ] = { 1, 5, 6 }  
(C) int [3] var = new int [ ] { 1, 5, 6 }      (D) int [ ] var = new int [ ] { 1, 5, 6 }  
1) &      2) %      3) + +      4) : ;  
1) A and B      2) A,B and D      3) A and C      4) None of the above

23. Consider the statement  
System.out.print(Math.round  
(Math.random( )));  
The statement can print  
1) only 0      2) only 1      3) only 0 or 1      4) any non - negative integer

24. Is null an object  
1) Yes      2) no      3) sometimes yes      4) none of the above

25. Which of the following statements will result in compilation error ?  
(A) signed int abc ;      (B) unsigned int abc ;      (C) signed byte abc ;      (D) signed long abc ;  
1) A,B and C      2) A,B and D      3) all the above      4) None

26. The statements  
double what is this = -1.010.0 ;  
System.out.print(what is this) ;  
1) results in compilation error      2) results in overflow error  
3) prints - Infinity      4) prints a garbage value

27. The operators ||, &&, \*, !, if arranged in the ascending order of precedence, read  
1) &&, \*, !      2), &&, \*, !      3), &&, ! \*      4) !, , &&, \*  
28. Which of the following is a well-defined state of a thread  
1) Ready state      2) Running state      3) Waiting state      4) All the above

29. A new thread can be created  
1) by extending thread class      2) by implementing the runnable interface  
3) both 1 and 2      4) none of the above

30. Which of the following statement is correct  
1) An interface does not have instance variable      2) Every method of an interface is abstract  
3) All the methods of an interface are automatically public  
4) All the above

31. The keyword used to include a particular package  
1) package      2) include      3) import      4) None

32. In Java Error class  
1) defines those exceptions which are not expected by the programmer to handle  
2) is used to handle exceptional conditions      3) both 1 and 2      4) None

**SAIMEDHA**

TIRUPATI-9494861234 VIJAYAWADA - 9494891234



*ECET(CSE - II)*

- ECET(CSE - II)**

46. Which keyword can protect a class in a package from accessibility by the classes outside the package?      3) final  
1) private      2) protected  
4) don't use any keyword at all (make it default)

47. Which of the following statements are true?  
1) An abstract class may not have any final methods.  
2) A final class may not have any abstract methods.  
3) An inner class may be declared with any accessibility keyword.  
4) Both 2 and 3

48. Which of the following are true about the Error and Exception classes?  
1) Both classes extend Throwable.  
2) The Error class is final and the Exception class is not.  
3) The Exception class is final and the Error is not.  
4) Both classes implement Throwable.

49. What is the data type for the parameter of the sleep() method?  
1) byte      2) long      3) float      4) Boolean

50. When a program does not want to handle exception, the \_\_\_\_\_ class is used.  
1) throws      2) catch      3) notify      4) wait

PRACTICE SET - III KEY

01) 4	02) 4	03) 4	04) 4	05) 2	06) 3	07) 2	08) 4	09) 4	10) 3
11) 4	12) 2	13) 1	14) 3	15) 1	16) 3	17) 2	18) 4	19) 2	20) 1
21) 1	22) 2	23) 3	24) 2	25) 3	26) 3	27) 2	28) 4	29) 3	30) 4
31) 3	32) 1	33) 1	34) 3	35) 1	36) 1	37) 4	38) 3	39) 2	40) 3
41) 4	42) 3	43) 3	44) 3	45) 2	46) 4	47) 4	48) 1	49) 2	50) 1

SELF TEST

01. Suppose that following and s2 are two strings. Which of the statements or expressions are correct  
1) String s3 = s1 + s2      2) s1 compare to (s2) ;    3) int m = s1. length ( ) ; 4) all the above

02. The methods wait ( ) and notify ( ) are defined in  
1) java. long. string    2) java. long. Runnable    3) java. long. object    4) java. long. Thread

03. When we implement the Runnable interface, we must define the method  
1) start ( )      2) int ( )      3) run ( )      4) runnable ( )

04. DataInput is  
1) an abstract class defined in java. io.    2) a class we can use to read primitive data types  
3) an interface that defines methods to open  
4) an interface that defines methods to read primitive data types

05. Which are the valid ways to create data input Stream streams?  
1) new DataInput Stream ( ) ; 2) new Datainput Stream ("in.dat", r")  
3) new DataInput Stream (new File ("in.dat"));

- public class Student  
 1) Class result should be declared public.  
 3) Student class is not available.
93. Which of the following are keywords?  
 1) switch & default      2) integer & byte      3) Boolean      4) object & class
94. Consider the following code:  
 interface Area  
 1) Method compute() in class Room should be declared public  
 2) Interface definition is incomplete  
 3) Method compute() in interface Area should be declared public  
 4) All of these
95. Which of the following will output -4.0  
 1) System.out.println(Math.floor(-4.7));  
 2) System.out.println(Math.round(-4.7));  
 3) System.out.println(Math.ceil(-4.7));  
 4) System.out.println(Math.Min(-4.7));
96. Which of the following methods are methods of the String class?  
 1) delete( )      2) append( )      3) reverse( )      4) replace( )
97. What is the method available for setting the priority?  
 1) getPriority( )      2) setPriority( )      3) Both 1 and 2      4) none
98. What is an example of polymorphism?  
 1) Inner class      2) Anonymous classes  
 3) Method overloading      4) Method overriding
99. Which of the following can be referenced by this variable?  
 1) The instance variables of a class only      2) The methods of a class only  
 3) The instance variables and methods of a class  
 4) none of the above
100. Which method is used to garbage collect an object?  
 1) finalize( )      2) get( )      3) throw( )      4) sleep( )

### PRACTICE SET - I KEY

01) 4	02) 4	03) 4	04) 4	05) 4	06) 3	07) 4	08) 2	09) 1	10) 1
11) 4	12) 2	13) 3	14) 1	15) 2	16) 2	17) 1	18) 4	19) 1	20) 1
21) 4	22) 3	23) 1	24) 4	25) 2	26) 2	27) 4	28) 1	29) 4	30) 2
31) 2	32) 3	33) 2	34) 3	35) 1	36) 3	37) 3	38) 2	39) 3	40) 3
41) 3	42) 1	43) 2	44) 3	45) 1	46) 2	47) 3	48) 1	49) 3	50) 2
51) 1	52) 4	53) 4	54) 2	55) 1	56) 1	57) 4	58) 2	59) 3	60) 4
61) 4	62) 3	63) 4	64) 4	65) 1	66) 4	67)	68) 4	69) 1	70) 1
71) 4	72) 4	73) 3	74) 1	75) 3	76) 4	77)	78) 4	79) 4	80) 1
81) 1	82) 1	83) 3	84) 2	85) 4	86) 4	87) 4	88) 2	89) 3	90) 3
91) 1	92) 2	93) 1	94) 1	95) 3	96) 4	97) 2	98) 3	99) 3	100)

## PRACTISE SET - II

- PRACTISE SET - II**

**JAVA**

01. Which of the following defines a legal abstract class  
1) abstract vehicle {  
    abstract void display () ; }  
2) abstract class Vehicle {  
    abstract void supply () ; }  
3) class abstract vehicle {  
    abstract void supply () ; }  
4) none

02. The concept of multiple inheritance is implemented in Java by  
1) extending two or more classes  
2) extending one class and implementing one or more interfaces  
3) implementing two or more interfaces  
4) both 2 and 3

03. Which of the following statements are valid array declaration  
1) int number ( ) ;  
2) float average [ ] ;  
3) double [ ] marks ;  
4) both 2 and 3

04. Consider the following code  
int number [ ] = new int [ 5 ] ;  
After execution of this statement, which of the following are true ?  
1) number [5] is undefined  
2) number [2] is 0  
3) number length ( ) is 5  
4) all the above

05. What will be the content of array available table after executing the following code  
for (int i = 0 ; i < 3; i + +)  
for (int j = 0, j < 3; j + +)  
if (j == i) table [i] [j] = 1;  
else table [i] [j] = 0;  
1)  
2)  
3)  
4)

06. .....Class is a class designed with implementation gaps for sub-classes to fill in  
1) An instance  
2) An abstract  
3) A class  
4) None of the above

07. The keyword gives a class explicit access to the constructors, methods, and variables of its second arguments  
1) final  
2) super  
3) instance of  
4) implicit

08. ....is a class defined in the java lang package, whereas it is primitive data type defined in the Java language  
1) int  
2) float  
3) char  
4) integer

09. Which of the following is not a reserved keyword in Java  
1) abstract  
2) boolean  
3) break  
4) count

10. In a method invocation, does java pass  
1) arguments by reference  
2) arguments by value  
3) arguments by pointer  
4) arguments by variable

11. Which one of the following methods must a subclass of Applet implement  
1) destroy ()  
2) init ()  
3) start ()  
4) none of the above

12. Which of the following methods are never run by the applet context  
1) destroy ()  
2) init ()  
3) main ()  
4) stop ()

13. Java Virtual Machine is an interpreter for byte code  
1) True  
2) False

14. When Java source code is completed, each individual class is put into its own output file named after the class and using the \_\_\_\_\_ extension





- ```
int iBegin=1;
char iEnd=3;
System.out.println(s.substring(iBegin,iEnd));
1) BiC                    2) ic                    3) icy                    4) error: no
method matching substring(int,char)
```
42. Which of the following statements about abstract methods/classes in Java are true?
- 1) An abstract class cannot be instantiated.
  - 2) Constructors cannot be abstract.
  - 3) A subclass of an abstract class must define the abstract methods.
  - 4) Both 1 and 2
43. What is meant by "Passing by value" and "Passing by reference"?
- 1) objects – pass by reference ; Methods - pass by value
  - 2) Method – pass by reference ; Objects – pass by value
  - 3) class – pass by value ; Objects – Pass by reference
  - 4) None of the above
44. Which of the following statements correctly describes the relation between an object and the instance variable it stores?
- 1) Each new object has its own distinctive set of instance variables
  - 2) Each object has a copy of the instance variables of its class
  - 3) the instance variable of each object are separate from the variables of other objects
  - 4) All the above
45. The this reference is used in conjunction with \_\_\_\_\_ methods.
- 1) static
  - 2) non-static
  - 3) final
  - 4) none of the above
46. What are the values of x and y ?
- x = 5; y = ++x;
- 1) x = 5 ; y = 5
  - 2) x=6 ; y = 5
  - 3) x=5 ; y=6
  - 4) x = 6 ; y = 6
47. Which keyword is used to create an instance of a class?
- 1) object
  - 2) new
  - 3) final
  - 4) friend
48. What is the output of the following program?
- ```
public class Question {
    public static void main(String args[]) {
        String s1 = "abc";
        String s2 = "def";
        String s3 = s1.concat(s2.toUpperCase( ) );
        System.out.println(s1+s2+s3);
    }
}
```
- 1) abcdefabcdef
  - 2) abcabcDEFDEF
  - 3) abcdefabcDEF
  - 4) None of the above
49. Which Java operator is right associativity?
- 1) \*
  - 2) /
  - 3) +
  - 4) =
50. Which of the following are true?
- 1) The Class class is the superclass of the Object class.
  - 2) The Class class can be used to load other classes.
  - 3) The ClassLoader class can be used to load other classes.
  - 4) both 2 and 3
51. Which of the following not declare an array of string objects?

52. 1) String[ ] s;      2) String [ ]s:      3) String[ s]:      4) String s[ ]:  
 What are the values of x and z?  
 $x = 5; z = x++;$   
 1) x = 6 ; z = 6      2) x = 5 ; z = 6      3) x = 6 ; z = 5      4) x = 5 ; z = 5
53. Which priority Thread can prompt the lower primary Thread?  
 1) Lower Priority      2) Higher Priority  
 3) Normal Priority      4) none
54. Which of the following keywords are used to control access to a class member?  
 1) public      2) abstract      3) protected      4) All of the above
55. Package p1 contains the following code:  
 package p1;  
 public class Student  
 1) Class result should be declared public.      2) Test class is not available.  
 3) Student class is not available.      4) Result body is not fully defined.
56. A package is a collection of  
 1) classes      2) classes and interfaces  
 3) interfaces      4) editing tools
57. The concept of multiple inheritance is implemented in Java by  
 1) extending two or more classes  
 2) extending one class and implementing one or more interfaces  
 3) implementing two or more interfaces      4) Both 2 & 3
58. What are the constants defined by both Float and Double classes?  
 1) MAX\_RADIX      2) MIN\_RADIX  
 3) MAX\_VALUE      4) MIN\_VALUE and TYPE.
59. Given the following declarations  
 String s1=new String("Hello")  
 String s2=new String("there");  
 String s3=new String();  
 Which of the following are legal operations?  
 1) s3=s1 + s2      2) s3=s1 - s2      3) s3=s1 & s2      4) s3=s1 && s2
60. Which of the following is not a wrapper class?  
 1) String      2) Integer      3) Boolean      4) Character
61. Garbage collector thread belongs to which priority?  
 1) High priority      2) low-priority      3) normal priority      4) none of these
62. What are the possible access modifiers when implementing interface methods?  
 1) Protected      2) Private      3) public.      4) none
63. Which of the following methods is used to get the error message for the exception that was thrown ?  
 1) print message      2) extract message      3) thrown message      4) get message
64. Java is a  
 1) course      2) Iseland      3) Subject      4) None
65. Java runs on  
 1) windows      2) Unix/linux      3) Mac      4) All of the above

PRACTICE SET - II KEY

- |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 01) 2 | 02) 4 | 03) 4 | 04) 4 | 05) 4 | 06) 2 | 07) 3 | 08) 4 | 09) 4 | 10) 2 |
| 11) 4 | 12) 3 | 13) 1 | 14) 2 | 15) 1 | 16) 2 | 17) 2 | 18) 4 | 19) 1 | 20) 2 |
| 21) 1 | 22) 2 | 23) 1 | 24) 4 | 25) 3 | 26) 2 | 27) 2 | 28) 4 | 29) 2 | 30) 2 |
| 31) 1 | 32) 2 | 33) 2 | 34) 2 | 35) 1 | 36) 3 | 37) 4 | 38) 4 | 39) 1 | 40) 4 |
| 41) 2 | 42) 4 | 43) 1 | 44) 4 | 45) 2 | 46) 4 | 47) 2 | 48) 3 | 49) 4 | 50) 4 |
| 51) 3 | 52) 3 | 53) 2 | 54) 4 | 55) 2 | 56) 2 | 57) 4 | 58) 1 | 59) 1 | 60) 1 |
| 61) 2 | 62) 3 | 63) 4 | 64) 2 | 65) 4 |       |       |       |       |       |

### **PRACTISE SET - III**



```
try {  
    int x = 0;  
    int y = 50/x ;  
    System.out.println("Division by zero");  
    System.out.println ("Catch block");  
}
```

- .....  
.....
- What will be the output  
 1) Error. Won't compile  
 2) Division by zero  
 3) Catch block  
 4) Division by zero Catch block
7. An.....is a Java compatible program that you can embed in a web page  
 1) javap  
 2) applet  
 3) servlet  
 4) tag
8. A class from which another class derived  
 1) Subclass  
 2) Derived class  
 3) Child class  
 4) all the above
9. A class from which other classes are derived  
 1) Base class  
 2) Parent class  
 3) Super class  
 4) all the above
10. Which of the following array declaration and instantiation are not legal  
 1) int [ ] a [ ] = new int [4] [4];  
 2) int a [ ] [ ] = new int [4] [4];  
 3) int a [ ] [ ] = new int [ ] [4];  
 4) int [ ] a [ ] = new int [4] [ ];
11. Given a variable x of type int (which may contain a negative value), which of the following are correct ways of doubling type value of x  
 1)  $x << 1;$   
 2)  $x = x * 2;$   
 3)  $x * = 2;$   
 4) both 2 and 3
12. Which of the following methods is executed first when an applet is run  
 1) destroy ()  
 2) init ()  
 3) main ()  
 4) stop ()
13. What does J2SE mean ?  
 1) Java 2 Platform Standard Edition  
 2) Java 2 Internet Standard Edition  
 3) Java 2 Platform Independent Standard Edition  
 4) Java 2 Systems Edition
14. An interface contains \_\_\_\_\_ methods  
 1) Non-abstract  
 2) Implemented  
 3) unimplemented
15. Given the following declarations  
 String s1 = new String ("Hello")  
 String s2 = new String ("there");  
 String s3 = new String ();  
 Which of the following are legal operations ?  
 1)  $s3 = s1 + s2;$   
 2)  $s3 = s1 - s2;$   
 3)  $s3 = s1 \& s2;$   
 4)  $s3 = s1 \& \&$
16. Which one is a key word in Java ?  
 1) Friend  
 2) Size of  
 3) extends  
 4) Null
17. What will be printed out if this code is run with the following command line ?  
 Java my-prog good morning  
 Public class my - prog  
 {Public static void main (string argv [ ])  
 {system.out.println (argv [2])}  
 1) my - prog  
 2) Exception raised : "java. long. Array index out of Bounds exception : 2"  
 3) Morning  
 4) good
18. Which character encoding scheme is followed for the "char" datatype in Java ?  
 1) ASC11  
 2) EBCDIC  
 3) BCD  
 4) Unicode
19. \_\_\_\_\_ operator is not a bit-wise operator  
 1)  $>>>$   
 2)  $>$   
 3)  $>>$   
 4)  $<<$
20. Which of the following feature in Java is not a keyword ?





PRACTICE SET - III KEY

01) 4	02) 4	03) 4	04) 4	05) 2	06) 3	07) 2	08) 4	09) 4	10) 3
11) 4	12) 2	13) 1	14) 3	15) 1	16) 3	17) 2	18) 4	19) 2	20) 1
21) 1	22) 2	23) 3	24) 2	25) 3	26) 3	27) 2	28) 4	29) 3	30) 4
31) 3	32) 1	33) 1	34) 3	35) 1	36) 1	37) 4	38) 3	39) 2	40) 3
41) 4	42) 3	43) 3	44) 3	45) 2	46) 4	47) 4	48) 1	49) 2	50) 1

SELF TEST

01. Suppose that following and s2 are two strings. Which of the statements or expressions are correct  
1) String s3 = s1 + s2      2) s1 compare to (s2) ;    3) int m = s1. length ( ) ; 4) all the above

02. The methods wait ( ) and notify ( ) are defined in  
1) java. long. string    2) java. long. Runnable    3) java. long. object    4) java. long. Thread

03. When we implement the Runnable interface, we must define the method  
1) start ( )                2) int ( )                3) run ( )                4) runnable ( )

04. DataInput is  
1) an abstract class defined in java. io.    2) a class we can use to read primitive data types  
3) an interface that defines methods to open  
4) an interface that defines methods to read primitive data types

05. Which are the valid ways to create data input Stream streams?  
1) new DataInput Stream ( ) ; 2) new Datainput Stream ("in.dat", r")  
3) new DataInput Stream (new File ("in.dat"));



21. Which of the following is the boolean operator for logical - AND ?  
 1) &                    2) &&                    3) 1                    4) 1&
22. A block comment can be written by  
 1) Starting every line with double slashes ( // )            2) starting with \* and ending with \*/  
 3) starting with /\* and ending with \*/                    4) starting with < ! - and ending with -! >
23. Which of the following identifiers is invalid ?  
 1) Papername            2) wrtername            3) typename            4) printname
24. Which of the following cannot be used as valid identifier ?  
 1) bitand                2) bittand                3) biand                4) band
25. Which of the following is not a valid escape code?  
 1) \t                    2) \v                    3) ]f                    4) \w
26. Let m be a variable of data type byte. The value of m << 4 is same as  
 1)                        2)                        3)                        4)
27. Which of the following operator tape (s) only integer operands  
 1) %                    2) ++ (Post - increment)            3) ++ (Pre-increment)            4) None
28. Which of the following is the correct operator to compare two variables ?  
 1) :=                    2) =                    3) equal                4) ==
29. A variable are / is  
 1) string that varies during program execution  
 2) A portion of memory to store a determined value.  
 3) Those numbers that are frequently required in programs 4) None of the above
30. A 'thread' is  
 1) a program is path of execution                    2) a program in execution  
 3) a set of programs                                4) None

### SELF TEST KEY

<b>01)</b> 4	<b>02)</b> 3	<b>03)</b> 3	<b>04)</b> 4	<b>05)</b> 4	<b>06)</b> 1	<b>07)</b> 4	<b>08)</b> 2	<b>09)</b> 1	<b>10)</b> 2
<b>11)</b> 1	<b>12)</b> 3	<b>13)</b> 1	<b>14)</b> 3	<b>15)</b> 4	<b>16)</b> 4	<b>17)</b> 3	<b>18)</b> 3	<b>19)</b> 2	<b>20)</b> 4
<b>21)</b> 2	<b>22)</b> 2	<b>23)</b> 3	<b>24)</b> 1	<b>25)</b> 4	<b>26)</b> 1	<b>27)</b> 4	<b>28)</b> 4	<b>29)</b> 2	<b>30)</b> 1