1. Which component is used to compile, debug and execute the java programs?
a) JRE
b) JIT
c) JDK
d) JVM

2. Which of these cannot be used for a variable name in Java?
a) identifier & keyword
b) identifier
c) keyword
d) none of the mentioned

3. What is the extension of java code files?
a) .js
b) .txt
c) .class
d) .java

4. What will be the output of the following Java code?

```
1.    class increment {

2.        public static void main(String args[])

3.        {

4.            int g = 3;

5.            System.out.print(++g * 8);

6.        }

7.    }
```

a) 32
b) 33
c) 24
d) 25

5. Which environment variable is used to set the java path?
a) MAVEN_Path
b) JavaPATH
c) JAVA
d) JAVA_HOME

6. Which of the following is not an OOPS concept in Java?
a) Polymorphism
b) Inheritance
c) Compilation
d) Encapsulation

7. What is not the use of "this" keyword in Java?
a) Referring to the instance variable when a local variable has the same name
b) Passing itself to the method of the same class
c) Passing itself to another method
d) Calling another constructor in constructor chaining

8. What will be the output of the following Java program?

```
1.    class variable_scope
2.    {
3.        public static void main(String args[])
4.        {
5.            int x;
6.            x = 5;
7.            {
8.                int y = 6;
9.                System.out.print(x + " " + y);
10.           }
11.           System.out.println(x + " " + y);
12.       }
13.   }
```

a) Compilation error
b) Runtime error
c) 5 6 5 6
d) 5 6 5

9. What will be the output of the following Java code?

```
1.    class box

2.    {

3.        int width;

4.        int height;

5.        int length;

6.    }

7.    class main

8.    {

9.        public static void main(String args[])

10.        {

11.            box obj = new box();

12.            obj.width = 10;

13.            obj.height = 2;

14.            obj.length = 10;

15.            int y = obj.width * obj.height * obj.length;

16.            System.out.print(y);

17.        }

18.    }
```

a) 100
b) 400
c) 200
d) 12

10. What is the extension of compiled java classes?
a) .txt
b) .js
c) .class
d) .java

11. Which of these are selection statements in Java?
a) break
b) continue
c) for()
d) if()

12. Which of these keywords is used to define interfaces in Java?
a) intf
b) Intf
c) interface
d) Interface

13. What will be the output of the following Java program?

```
1.    class Output
2.    {
3.        public static void main(String args[])
4.        {
5.            double x = 2.0;
6.            double y = 3.0;
7.            double z = Math.pow( x, y );
8.            System.out.print(z);
9.        }
10.   }
```

a) 9.0
b) 8.0
c) 4.0
d) 2.0

14. Which one of the following is not an access modifier?
a) Protected
b) Void
c) Public
d) Private

15. Java source files are compiled and converted to ?

    a) Object code

    b) Machine code

    c) Bytecode

    d) executable file

16. ——————————— Variables and methods can be called without using the objects.

    a) Static

    b) Final

    c) Abstract

    d) None of the above

17. Which of the following is a valid declaration of an object of class Box?

    a) Box obj = new Box();

    b) Box obj = new Box;

    c) obj = new Box();

    d) new Box obj;

18. Variables declared within a class are called

    a) Identifier

    b) Local variable

    c) Instance variable

    d) Global variable

19. Variables declared within a methods are called

    a) Identifier

    b) Local variable

    c) Instance variable

    d) Global variable

20. Which of the following is a valid identifier in java?

    a) x1

    b) 1x

    c) $x

    d) x 1

21. Method,Field can be accessed from the same class to which they belong.

    a) Public

    b) Private

    c) Protected

    d) Default

22. Method,Field,class can be accessed only from the same package and not from outside of it's native package.

    a) Public

    b) Private

    c) Protected

    d) Default

23. Method,Field can be accessed from the same class to which they belong or from the sub-classes, and from the class of same package, but not from outside.

    a) Public

    b) Private

    c) Protected

    d) Default

24. Class,Method,Field is accessible from anywhere.

    a) Public

    b) Private

    c) Protected

    d) Default

25. What is the output of the following program?

A.
```
public class Output{
        public static void main(String[] args){
                int j,k,L;
                j = 30;
                k = 10;
                k = k - 5;
                L = k / 5;

                System.out.println("j = "+ j);
                System.out.println("k = "+k+",");
                System.out.println("L = "+L);
        }
}
```

B.
```
int x,y,z;

y = 1;
z = 5;
x = 0 - (++y) + z++;
System.out.println(x+y+z);
```

C.
```
int i = 0;
i = i++ + i;
System.out.println("I = "+ i);
```

D.
```
int x,y;
x = 20;
y = 9;

while(x>1){
        System.out.println(x+y);
        y -=1;
        x -=y;
}
```

E.
```
int x = 5;
int y = 3;

if(x == y){
        System.out.println("A");
}
else if(x < 5 && y > 2){
        System.out.println("B");
}
if(x > 2 || y > 4){
        System.out.println("C");
}
```

F.
```
int val = 5;

if(val < 10){
        val +=2;
        if(val != 5){
                System.out.println("Wow");
}       else{
                val +=1;
        }
}else{
        val +=2;
        if(val == 17){
                val +=10;
        }else{
                System.out.println("Whoa");
        }
}
```

G.
```
int val = 15;

if(val < 10){
        val +=2;
        if(val != 5){
                System.out.println("Wow");
}       else{
                val +=1;
        }
}else{
        val +=2;
        if(val == 17){
                val +=10;
        }else{
                System.out.println("Whoa");
        }
}
```

```
H.      boolean b1 = true;
        boolean b2 = false;

        int x = 3;
        int y = 5;
        int z = 7;

    1)  System.out.println(x >= 0 && x < 10);
    2)  System.out.println(x < 0 || x < 10);
    3)  System.out.println(!b1 && b2 && (x >= 0));
    4)  System.out.println(!(b1 || b2 || (y < 10)));
    5)  System.out.println(!(!b1 && !b2 && !(z<y)));


I.      int datacount = 1;
        while(datacount <= 6){
                if(datacount % 2 == 2){
                        System.out.println("First Set");
                }else if(datacount % 3 == 0){
                        System.out.println("Second Set");
                }else{
                        System.out.println("Third Set");
                }

                datacount++;
        }

J.      int m = 5;
        Int n = 10;

        while(n >= 1){
                System.out.println(m*n);
                n--;
        }

K.      int i = 1;
        int n = 6;
        int f = 1;

        while(i <= n){
                f = f*i;
                i++;
                System.out.print(f+" ");
        }
```

```
L.      int x = 5;
        int y = 75;

        while(x <= y){
                y = y/x;
                System.out.println(y);
        }
```

26. QUESTIONS

1. Write a program to enter the numbers till the user wants and at the end it should display the count of positive, negative and zeros entered.

2. Write a program to find number and sum of all integer between 100 and 200 which are divisible by 9.

3. Write a program to enter the numbers till the user wants and at the end the program should display the largest and smallest numbers entered.

4. Write a method named isEven that accepts an int argument. The method should return true if the argument is even, or false otherwise. Also write a program to test your method.

5. Write a program with a method named getTotal that accepts two integers as an argument and return its sum. Call this method from main( ) and print the results.

6. (a) Using a `While` loop, write a program that displays a "6 times" multiplication table; the output should look like this:
```
1.  1 x 6 = 6
2.  2 x 6 = 12
3.  3 x 6 = 18
4.  4 x 6 = 24
5.  5 x 6 = 30
6.  6 x 6 = 36
7.  7 x 6 = 42
8.  8 x 6 = 48
9.  9 x 6 = 54
10. 10 x 6 = 60
11. 11 x 6 = 66
12. 12 x 6 = 72
```

7. Write a program with a loop that asks the user to enter a series of positive numbers. The user should enter a negative number to signal the end of the series. After all the positive numbers have been entered, the program should display their sum.

8. Write a Java application that inputs a series of integers and determines and prints the largest integer. Your program should use at least the following three variables:
(a) counter: A counter to count to 10 (i.e., to keep track of how many numbers have been input and to determine when all 10 numbers have been processed).
(b) number: The integer most recently input by the user.
(c) largest: The largest number found so far.

9. Write a program that asks the user to enter the amount that he or she has budgeted for a month. A loop should then prompt the user to enter each of his or her expenses for the month, and keep a running total. When the loop finishes, the program should display the amount that the user is over or under budget.

10. Write a Java program that determines a student's grade.

The program will read three types of scores (quiz, mid-term, and final scores) and determine the grade based

on the following rules:

-if the average score >=90% =>grade=A

-if the average score >= 70% and <90% => grade=B

-if the average score>=50% and <70% =>grade=C

-if the average score<50% =>grade=F

See the example output below:

Quiz score: 80

Mid-term score: 68

Final score: 90

Your grade is B.

11. Write a program to display all odd numbers between 0 and 1000.

12. Write a program to display the sum of all even numbers between 0 and 100

13. A bus company organizes a tour. each participant would pay $2500. Given the number of participants,

write a program that calculate and prints the revenue the company will generate for the tour.

14. If you have N eggs, then you have N/12 dozen eggs, with N%12 eggs left over. (This is (solution)

essentially the definition of the / and % operators for integers.) Write a program that asks the user how many eggs she has and then tells the user how many dozen eggs she has and how many extra eggs are left over.

A gross of eggs is equal to 144 eggs. Extend your program so that it will tell the user

how many gross, how many dozen, and how many left over eggs she has. For example, if

the user says that she has 1342 eggs, then your program would respond with

Your number of eggs is 9 gross, 3 dozen, and 10.

15. Write a program that reads number of gallons of gas in the tank of a car, the number of miles per gallon, and the price of gas per gallon. the program then computes and prints:

1 - How far (in miles) the car can travel with the gas

2 - The cost of travelling 250 miles with the car

TO BE CONTINUE……………………………………