CDAC MUMBAI

Day 3 Assignment

Note: Use pen and paper wherever is needed.

1. What is wrong with the following piece of code?

```
int i = 10;
while (i < 5) {
 i++;
System.out.println(i);
 }
```

it will not print anything because while condition is getting false at first iteration only.

2. Write a condition that will print ”passed” if a variable called result is greater than 40 and ”failed” otherwise.

3. How many exclamation marks will the following loop print?

```
for (int i = 0; i < 10; i++) {
System.out.print(‘!’);
 }
```

10 times

4. Rewrite the following using a for loop

```
int number = 10;
while (number < 15) {
System.out.println("*");
number++;
 }
```

5. Assume getnumber(); returns a number entered by a user. What does the following piece of code do?

```
int i = getnumber();
while (i < 10) {
i++;
int j = getnumber();
 if (j == 0) {break;}
else if (j == 1) {continue;}
System.out.println(i);
 }
System.out.println("finished");
```

if i=0 then j=0 and because of break we will jump out of loop, finished will printed
if i=1 then j=1 and because of continue it will skip the imediate next statement and finished will be printed
for numbers greater than 1 number will be printed after it will print finished

6. Rewrite the following using a switch statement.

```
if (i == 10){
System.out.println("Congratulations you have full marks");
} else if (i == 9) {
System.out.println("Congratulations you have almost full marks");
} else if (i == 8) {
System.out.println("Congratulations you have done very well");
} else if (i == 7) {
System.out.println("Congratulations you have done well");
} else if (i == 6) {
System.out.println("You are doing alright but could study more");
} else if (i == 5) {
```

```
System.out.println("You only got half marks, you need to do more”)

System.out.println("You got less than half marks, you need to do mor} else if (i == 3) {

System.out.println("You have got low marks, see a teacher");

} else if (i == 2) {

System.out.println("You have got very low marks, see a teacher");

} else if (i == 1) {

System.out.println("You only got 1 mark, see a teacher");

} else {

System.out.println("You have failed abysmally")

}
```

7. Assume getnumber(); returns a number entered by a user. What does the following piece of code do?

```
do {

int i = getnumber();;

System.out.println(i);

} while {i != 0);
```

it will print the number given by user infinite times.

8. What does the following program print?

```
// This is the Hello Mumbai program in Java

class HelloMumbai {

public static void main (String args[]) {

String name = "Mumbai";

/* Now let’s say hello */

System.out.println("Hello + name");

}
```

it will print Hello + name

```
}
```

9. Write a for loop that will print the numbers between 10 and 20.

10. What is wrong with the following piece of code?

```
if (i = 10) {

System.out.println("Success");

}
```

for if statement we have to give boolean values only.
here we are assigning 10 value to i which will give error.

11. Assume getnumber(); returns a number entered by a user. Write some code using a while loop that echos whatever number the user enters unless they enter 0 in which case the program exits. Could you do this with a for loop?

12. What does the following piece of code do:

```
if ((i < 10) || (i == 15)) {

i++;

System.out.println(i);

}
```

if condition is true then i,s value will be incremented by 1 and then the value will be printed.

13. Write a Java program to display the multiplication table of a given number. The program should ask the user to enter a number and then use a for loop to display the multiplication table of that number from 1 to 10.

14. Write a Java program to find the factorial of a number. The program should ask the user to enter a number and then use a while loop to calculate and display the factorial of that number.

15. Write a Java program to calculate the sum of digits of a number. The program should ask the user to enter a number and then use a do-while loop to calculate and display the sum of digits of that number.

16. Write a Java program to check whether a number is prime or not. The program should ask the user to enter a number and then use if-else statements to check and display whether the number is prime or not.

17. Write a Java program to display the name of a month based on its number. The program should ask the user to enter a number (1 to 12) representing a month and then use a switch-case statement to display the name of the corresponding month.

18. Write a Java program for a simple calculator that performs addition, subtraction, multiplication, and division. The program should ask the user to enter two numbers and then ask

the user (or hardcode the value) to choose an operation (addition, subtraction, multiplication, or division) using a menu. Use a switch-case statement to perform the selected operation and display the result. If the user selects an invalid operation, display an error message.

Expected output: