INSTITUTE OF SOFTWARE ENGINEERING

GRADUATE DIPLOMA IN SOFTWARE ENGINEERING

ASSIGNMENT NAME

Programming fundamentals

ASSIGNMENT NO

06

NUMBER OF QUESTIONS:

NUMBER OF COMPLETED QUESTIONS:

NUMBER OF REMAINING QUESTIONS:

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BATCH NO:59

01.

a. legal → run time error because main method is not found.

b. illegal → main method has not (String args[])

c. illegal → invalid method declaration

d. illegal → not given method name

e. illegal → invalid method declaration

f. illegal → invalid method declaration

g. illegal → used a ";" for a variable declaration

h. illegal→ can not identify the x

i. illegal→ not given a data type to 100

j. illegal →

k. legal → run time error because main method is not found.

l. legal → run time error because main method is not found.

02. 1. not values to pass for the method

   6. incompatible data type in the Myclass printName method

   8. not values to pass for the method and initialize name3 variable.

03.
```java
import java.util.*;
class Example{
        public static void main(String args[]){
                getMarks();
                }
                public static void getMarks(){
                        Scanner input=new Scanner(System.in);
                        int total=0;
                        double avg;
```

```java
        for(int i=0; i<10; i++){
            System.out.print("Enter marks : ");
            int marks=input.nextInt();
total+=marks;
}
System.out.println("total is : "+total);
avg=(double)total/10;
System.out.println("average is : "+avg);
        }
    }
```

04.
```java
import java.util.*;
class Example{
    public static void maxNum(int a, int b, int c){
  int max=a;
  if(a<b){
            max=b;
            }
if(b<c){
    max=c;
    }
            System.out.println(max);
            }
    public static void main(String args[]){
            Scanner input=new Scanner(System.in);
            System.out.print("Enter an Integer : ");
            int n1=input.nextInt();
```

```java
			System.out.print("Enter an Integer : ");

			int n2=input.nextInt();

			System.out.print("Enter an Integer : ");

			int n3=input.nextInt();

			maxNum(n1,n2,n3);

			}

		}
```

05.

```java
import java.util.*;

class area{

	public static void main(String args[]){

			Scanner input=new Scanner(System.in);

			System.out.print("Enter radius of the Circle :  ");

			double r=input.nextInt();

			getArea(r);

			}

	public static void getArea(double a){

			double ar=(3.141)*a*a;

			System.out.println("Area is : "+ar);

			}

		}
```

06.

```java
import java.util.*;
class sod{
	public static void printDigitsCount(int num){
		int total=0;

		while(num!=0){
			int x=num%10;
			total=total+x;
			num=num/10;
		}
		System.out.println("total : "+total);
	}
	public static void main(String[] args){

		Scanner input=new Scanner(System.in);
		System.out.print("Input an integer : ");
		int num=input.nextInt();

		printDigitsCount(num);

	}
}
```

07.

```java
import java.util.*;
class dos{
    public static void printDigitsCount(int num){
        while(num!=0){
            int x=num%10;
            System.out.print(x);
            num=num/10;
        }
    }
    public static void main(String[] args){
        Scanner input=new Scanner(System.in);
        System.out.print("Input an integer : ");
        int num=input.nextInt();
        printDigitsCount(num);
    }
}
```

10.

```java
 mport java.util.*;
class year{
    public static void getYear(int a){
    int x=a%4;

        if(x==0){
            System.out.println("leap year");
        }else{
```

```java
                    System.out.println("Not leap year");
                }
            }
            public static void main(String args[]){
                Scanner input=new Scanner(System.in);
  System.out.print("Enter a year :  ");
                int y=input.nextInt();
                getYear(y);
            }
        }
```

11.
```java
class hnum{
public static void fibonacciNumbers(){
        int n1=0,n2=1,n3;
        System.out.print(n1+" "+n2);
        for(int i=2; i<10;++i){
                n3=n1+n2;
                System.out.print(" "+n3);
                n1=n2;
                n2=n3;
        }
        }
public static void main (String args[]){
        fibonacciNumbers();
        }
}
```

12.

Line 2 – Invalid method calling.

Line 4 – Invalid method calling. cant use {} with method calling
          Statement.

Line 5 - cant use {} and ; with method calling Statement.

Line 8 – illegal output.

13,   Line 4, line 8, line 9, line 11, line 12

14.

```java
import java.util.*;
class armstrong{
    public static void main(String args[]){
        Scanner input=new Scanner(System.in);
        int r,sum=0,temp;
        System.out.print("Input a number : ");
        int n=input.nextInt();

        temp=n;
        while(n>0){
            r=n%10;
            sum=(sum*10)+r;
            n=n/10;
        }
    if(temp==sum)
        System.out.println("palindrome number ");
    else
        System.out.println("not palindrome");
```

```
        }
}




15.
    import java.util.*;
class ex{  public static int toBinaryString(int x){
System.out.println(Integer.toBinaryString(x));

  return x;

   }

  public static void main(String args[]){

   Scanner input=new Scanner(System.in);

   System.out.print("Enter a decimal value : ");

   int dec=input.nextInt();

  System.out.println(toBinaryString(dec));

     }

   }
```

16. A, B, C, H

17. C – prints 1 3 5 3 4 6

18. C – prints 1, 2, 3, 4, 5, 3

19. E – prints 1, 2, 3, 4, 9,

20.

```java
import java.util.*;
 class Example{
 public static double isPass(double i){
  if(i>=50){
   System.out.println("pass");
   }else
    System.out.println("fail");
   return i;   }
  public static void main(String s[]){
  Scanner input=new Scanner(System.in);
   System.out.print("Input avarage marks : ");
 double avg=input.nextDouble();
 System.out.println(isPass(avg));

  }
  }
```

21.

```java
  import java.util.*;
 class ex{  public static int abs(int x){
  if(x<0){
  x=x*-1;   }else    x=x;
 return x;   }
  public static void main(String s[]){
  Random r=new Random();
 for(int i=0; i<10; i++){
  int rand=r.nextInt();
   System.out.println("Absolute " +rand+": "+abs(rand));
  }  }  }
```

22.

```java
import java.util.*;
class ex{  public static int isEven(int x){
  int y=x%2;
   if(y==0){
   System.out.println(x+" is an even number" );
}else
 System.out.println(x+" is an odd number" );
return y;
  }
  public static void main(String s[]){
   Random r=new Random();
 for(int i=0; i<10; i++){
   int rand=r.nextInt();
    System.out.println(isEven(rand));
}
  }
  }
```

23.

i. First run the main method by JVM.

ii. After that declare a new variable and initialize to it 100. After that prints "x" value "x : 100".

iii. Next call the increment method we alredy declared and JVM go to the increment method. In this method first declare the variable x in method brackets and its include the return type because of that this method converted to retun type parameterzed method.

iv. After that increase the x variable in 1 and prints "x : 101" and variable x retuns to main method.

v. Next print the value of x in main method declared. It prints "x : 100" .

vi. After this statement call the increment method again and the increment method value assign to the main method variable x. Because the method calling run again the increment method and print "x : 101".

vii. Retun again the increment method x value to the main method and prints "x : 101" because upper statement assigned the increment method x value For the main method x value.

24. B, C, D, F, G

25. A – Illegal

 B – Illegal

  C – Illegal

D – Illegal

 E – Illegal

F – Illegal

G – Legal

H – Legal

26.

```
import java.util.*;
class ex{
public static int toBinaryString(int x){
System.out.println(Integer.toBinaryString(x));
  return x;
}
public static int toOctalString(int x){
  System.out.println(Integer.toOctalString(x));
  return x;
}
 public static int toHexString(int x){
  System.out.println(Integer.toHexString(x));
```

```java
    return x;
}
public static void main(String args[]){
System.out.println(toBinaryString(100));
System.out.println(toOctalString(100));
System.out.println(toHexString(100));
    }
}
```