

NARBHERAM HANSRAJ ENGLISH SCHOOL
COMPUTER WORKSHEET STD 12

FULL MARKS : 50

Predict output :

[4x5=20]

- 1) The following `Recur()` is a part of some class, what will be the output of the Function `Recur()` when the value of `n` is equal to 10. Show the dry Run/ working.

```
void Recur(int n)
{
    If( n>1)
    {
        System.out.print(n+ " ");
        If( n%2==1)
        {
            n=3*n+1;
            System.out.print(n+ " ");
        }
        Recur( n/ 2);
    }
}
```

- 2) The following function `fun12()` is a part of some class. What will be the output of the function `fun12()` when the value of `n` is "COMPUTER" and the value of `p` is 7. Show the dry run/ working.

```
void fun12(String n, int p)
{
    If( p<0)
        System.out.println( );

    else
    {
        System.out.println(n.charAt(p)+".");
        fun12(n,p-1);
        System.out.print(n.charAt(p));
    }
}
```

- 3) The following is a part of some class. What will be the output of the function `fun11` when the value of `counter` is equal to 4. Show the Dry Run / Working.

```
void fun11(int counter)
{
    If(counter==0)
```

```

System.out.println( );
else
{
    System.out.println("Day " + counter);
    fun11(counter-1);
    System.out.println(" "+counter);
}
}

```

- 4) The following functions numbers(int) and numbers1(int) are a part of some class. Answers the questions given below showing the dry Run/ Working.

```

public void numbers(int n)
{
    If(n>0)
    {
        System.out.print(n+" ");
        numbers(n-2);
        System.out.print(n+ " ");
    }
}
public String numbers1(int n)
{
    If(n<=0)
    return"";
    return numbers1(n-1)+n+" ";
}

```

- i) What will be the output of the function numbers(int n) when n=5 ?
- ii) What will be the function numbers1(int n) return when n=6 ?
- iii) State in one line what is the function numbers1(int) doing apart from recursion ?

Question 5:

[10]

A class **Recursion** has been defined to find the Fibonacci series upto a limit. Some of the members of the class are given below:

Class Name : Recursion

Data Members/instance variables : a, b, c, limit (all integers)

Member functions/methods :

Recursion() : constructor to assign a,b,c with appropriate values.

void input() : to accept the limit of the series.

int fib(int n) : to return the **nth** Fibonacci term using **recursive technique**.

void generate_fibseries() : to generate the Fibonacci series upto the given limit.

Specify the class **Recursion** giving details of the **constructor**, **int fib()** , **void generate_fibseries()**. You may assume other functions are written for you and you need not write the main function.

Question:6

[10]

Write a Program in Java to input a Date in ddmmyyyy 8-digit format and print it in:

- 1) dd/mm/yyyy format
- 2) dd, month name, yyyy format

Input: 01011943

Output:

01/10/1943

1 January, 1943

Question 7:

[10]

Write a Program in Java to input a number in Hexadecimal number system and convert it into its equivalent number in the Decimal number system.

Note: Hexadecimal Number system is a number system which can represent a number in any other number system in terms of digits ranging from 0 to 9 and then A – F only. This number system consists of only sixteen basic digits i.e. 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E and F. Here 10 is represented as A, 11 as B and so on till 15 which is represented as F.