



c) Fill in the blanks in the following code to get the following output:

OUTPUT: 1 2 2 3 3 3 4 4 4 4

```
CODE: for(i=1; i<= ____i++)
    { for(j=____ j<=____; j++)
    {System.out.print(____);}}
```

d) Convert the following if block to switch block

```
if(a==2) (3)
    System.out.println("two");
else
if(s==3)
    System.out.println("three");
else
    System.out.println("it's a number');
```

e) if a = 50 and b = 40 find the value of g if  $g = a++ - -a + b++ + (b/2)$  (2)

f) Give the output of the following for loop : (2)

```
for(i=100;i>=0;i=i/10)
    System.out.println(i);
    System.out.println("program over');
```

g) State whether the following statements are true or false : (3)

- (i) The two type of values that a boolean datatype returns are true and false.
- (ii) The function `Math.pow(2,2)` returns 2 and the function `Math.sqrt(2)` returns 4.
- (iii) The statement `x=(a>10) ? 25: 45;` is an example of ternary operator;

h) Convert the following into an if block: (2)

`f=(v==100)?0.1*v; 0.2*v;`

SECTION B (15 X 4 = 60 marks)

Each program should be written using variable description / Mnemonic codes such that the logic of the program is clearly depicted.

ATTEMPT ANY FOUR QUESTIONS

- 4. Write a program to input a number and check whether it is a prime number or not. (A prime number is one which has two factors 1 and the number itself).
- 5. Write a program to input the radius of a circle, length and breadth of a rectangle, side of a square and a choice. If choice is 1 calculate and print the area of a circle ( $\pi \text{radius}^2$ ), if choice is 2 calculate and print the area of a square (side\*side), if choice is 3 calculate and print the area of a rectangle(length\*breadth).
- 6. Write a program to print the following patterns using two functions(use loop construct)

```
Pattern1()- 12345
              1234
              123
              12
              1
```

```
Pattern2()
           1
          11
         111
        1111
```