

## Half Yearly Examination 2016-2017

Std. : IX  
Subject : Computer Application

Full Marks : 100  
Time : 2 Hrs.+15mins.

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**I. Explain following terms :—**

[5x2=10]

- a) JDK
- b) JVM
- c) OOP
- d) comments in bluej
- e) private

**II. Write difference among following with example.**

[5x2=10]

- a) class and object
- b) char and boolean
- c) round and floor
- d) ++ and +
- e) \t and \n

**III. Explain following questions :—**

[5x2=10]

- a) What are identifiers ? Give 2 examples.
- b) Why a class is known as object factory ?
- c) What is exit and entry control loop ?
- d) What are jump statement ? Explain with example.
- e) What is fall through method ?

**IV. Write output of following :— [5x2=10]**

- a) 

```
for (i=i ; i <=5 ;) / i = i + 2)
{
    System.out.println(i);
}
```
- b) 

```
for (i=1; i<4; i++)
{
    for (j=4; j>=i; j--)
    {
        System.out.print (j);
    }
    system.out.print();
}
```

```

c)  int m=7, p=1;
      do
      {
          if (m%2==0)
              p=p*m;
              m++;
      }
      while (m<=25);
          System.out.print (p);

d)  for (float x=1.0 ; x<=4.0; x=x+.5)
      {
          System.out.println(x);
      }

e)  int x=1, s=0;
      while (x<=20)
      {
          s=s+x;
          x+=2;
      }
      system.out.println(s);
  }

```

**SECTION - B (60 Marks) (15x4=60)**

**(Attempt any 4 questions from this section) [15x4=60]**

- Write a program to find the sum of digits (square of even digits and cube of odd digits) of a number entered by the user.

```

input -    23
output -   2x2 + 3*3*3
           4+27
           = 31

```

- Write a program to accept an option from the user and a number. if option is 1 Display all digits of the number.

If option is 2 Display sum of digits of the number

If option is 3 Display "Thank you"

- Create a class series.

Series 1 ( ) — It will solve following series

$$\frac{2!}{2} + \frac{3!}{3} + \frac{4!}{4} \dots \text{till } n \text{ terms}$$

Series 2 ( ) — It will solve following series

$$\frac{1+2}{1 \times 2} + \frac{1+2+3}{1 \times 2 \times 3} + \frac{1+2+3+4}{1 \times 2 \times 3 \times 4} \dots \text{till } 10 \text{ terms}$$

Series 3 ( ) — It will solve following series

$$x + 2x + 3x + 4x + 5x + 6x + \dots \text{ till } nx$$

4. Write a program to accept a no. and check it is an Armstrong number or not

ex — 1 5 3

$$\begin{aligned} & 1^3 + 5^3 + 3^3 \\ &= 1 + 125 + 27 \\ &= 153. \text{ so } 153 \text{ is an Armstrong number.} \end{aligned}$$

5. Write a program to accept any 1 option among 1 to 3.

If option is 1 solve  $vol = s*s*s$

If option is 2 solve  $vol = \frac{4}{3} \pi r^3$

If option is 3 solve  $vol = l*b*h$

Here user will accept option and values for s,r,l,b,h

6. Write a program to calculate simple interest as per given conditions.

<u>Time</u>	<u>Rate of Interest</u>
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for 1 year	6.5%
------------	------

for 2 years	7.5%
-------------	------

for 3 years	8.5%
-------------	------

for 4 years and more	9.5%
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Here user will enter principle and time

$$SI = \frac{P*r*t}{100}$$