

Half-yearly Examination - 2016-2017
COMPUTER APPLICATIONS

Time : 2 Hrs. 15 min

F. M. : 100

Std. : X

SECTION A (40 Marks)

(Attempt all questions in this Section)

1.
 - a. Name two types of Java programs
 - b. Define instance variable. Give an example of the same.
 - c. Differentiate Binary and linear search
 - d. Assign the value of PI (i.e. --> 3.14) to a variable with requisite data type.
 - e. Explain with an example if-else - if construct

2.
 - a. Name any two classes (5x2=10)
 - b. What is the difference between a break statement and a continue statement when they occur in a loop?
 - c. Write statement to show how finding the length of character array char [] differs from finding the length of a string object str.
 - d. Write a statement to create an object mp4 of class Digital.
 - e. What is the data type of the following library functions return.
 - i. Character . isWhitespace (char)
 - ii. Math.random ()

3.
 - a. What is an array? Write a statement to declare an integer array of 10 elements. (5x2=10)
 - b. Differentiate public and private modifiers for members of a class
 - c. Write difference between call by value and call by reference
 - d. What are the values of x and y when the following statements are executed
int a = 63, b = 36
boolean x = (a > b) ? true : false ;
int y = (a < b) ? a : b
 - e. State the value of n and ch
char c = 'A' ;
int n = c + 1 ;
char ch = (char) n;

4. a. What will be value of x (5x2=10)

```
int x = 4 ;
```

```
x += (x++) + (++x) + x ;
```

b. double b = - 15.6 ;

```
double a = Math rint (Math.abs(b)) ;
```

c. Write an expression in java for following

$$z = \frac{5x^3 + 2y}{x + y}$$

d. Write output of the following

```
int p = 200 ;
```

```
while (true)
```

```
}
```

```
if (p < 100)
```

```
break ;
```

```
p = p - 20;
```

```
}
```

e. int m, n;

```
m = 2 ; n = 15 ;
```

```
for (int j = 1; j <= 5; j++) ;
```

```
{
```

```
m++ ;
```

```
-- n ;
```

```
}
```

```
System.out.println (m + "\t" + n);
```

SECTION B (60 Marks)

(15x4=60)

Attempt any 4 questions from this Section

1. Write a program to accept any 10 words from the user and sort them in alphabetical order using BUBBLE sort technique.

sort technique

example – outlet – Ball, Cat, Ant

output – Ant, Ball, Cat

2. Accept 50 number in an array and print palindrome numbers only

example – 101, 213, 414, 2002 ----- etc.

output – 101, 414, 2002

