

Computer Application

Max. Marks : 100
Time : 2hr

SECTION - A (40 Marks)

This paper is divided into two sections.

Attempt all questions from Section A and any four questions from Section B.

- Q.1. (a) How platform independency is achieved in java? [10]
 (b) Explain protected access specifier in java.
 (c) Write any two rules for naming variable.
 (d) What are the different parts of function ?
 (e) What are messages in java terms?
- Q.2. (a) Write the first line of class in Java called Product and define a boolean method sale() as a member of the class [10]
 (b) What are the main categories of data types in java?
 (c) How many operands does the ternary conditional operator take ?
 (d) Explain if-else-if construct with example.
 (e) Give the output of the following program code

```
int a = 10;
while (++a<20) {
  if(a%3== 0)
  break;
System.out.println(a);
};
```
- Q.3. (a) Differentiate between formal and actual parameter [02]
 (b) Write java statements to perform the following tasks :
 (i) convert int type variable (y) to float.
 (ii) check if a character (c) is a space (blank) [02]
 (c) State the difference between compareTo() and equals() method. [02]
 (d) Write a statement to extract the last three characters of a word stored in the variable wd. [02]
 (e) What is the use of the keyword import. [02]
- Q.4. (a) How does String class differ from StringBuffer class ? [02]
 (b) Name the package that contains class System. [02]
 (c) Determine errors in the following statements of Java programs and correct them [03]
 (i) int a[10] = {8,7,2,3,6,9};
 (ii) String x = ("JAVA" , "BlueJ");
 (iii) char num[] = {2,3,4,5,6};
 (d) What is the need of implementing array concept in programming ? [03]

SECTION - B (60 Marks)

Attempt any four questions from this Section.

The answers in this Section should consist of the Program in **BlueJ** environment with **Java**. Each program should be written using **Variable description**

Q.4. Write a program to find the sum of the following series :

$$\frac{1}{1*2*3} + \frac{1}{2*3*4} + \dots + \frac{1}{(n-2)*(n-1)*n}$$

[15]

Q.5. Write a program to input category of a person and compute his/her income tax belonging to one of the following category :

Category	Taxable Income (Rs.)	Income Tax (Rs.)
A	below or equal to 50000	Nil
B	50001 to 60000	10% of (Income - 50000)
C	60001 to 150000	1000 + 15% of (Income - 60000)
D	above 150000	15000 + 20% of (Income - 150000)

[15]

Q.6. Write a program to print the following format :

```
abcdef.....z
bcdef.....z
cdef.....z
def.....z
.
.
.
xyz
yz
z
```

[15]

Q.7. Store the following numbers in two single dimensional arrays :

A[] = 2,3,7,-8

B[] = 9,-1,-4,6

Write a program that merge A and B arrays in a third array C as follows :

C[] = 2,9,3,-1,7,-4,-8,6

[15]

Q.8. Store final examination marks of 40 students in three subjects Maths , Science and Computer Applications in array. Write a program in java to determine the following :

(i) Highest marks in Computer Applications

(ii) Average marks obtained by each student

[15]

Q.9. Write a program to enter a string and convert its characters as given below:

B/b -> A/a , C/c -> B/b , , Z/z -> Y/y , A/a -> Z/z

1 -> 0 , 2 -> 1 , , 9 -> 8 , 0 -> 9

blank (' ') -> \$

Rest of the characters should not change.

For example :

Input string : I.C.S.E. Examination 2007

Output string : H.B.R.D.\$Dwzlhzmshnm\$1996

[15]



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