PRE-COMPARATIVE EXAMINATION
COMPUTER APPLICATIONS

(Theory)

(One Hour)

Answers to this Paper must be written on the paper provided separately.

The time given at the head of this Paper is the time allowed for writing the answers.

This Paper is divided into two Sections.

*Attempt **all** questions from **Section A** and **any three** questions from **Section B.***

The intended marks for questions or parts of questions are given in brackets[].

SECTION A (5 Marks)

*Attempt **all** questions*

Question 1.

1) In a nested loop, which loop closes at last?

a. Inner loop b. Outer loop c. Both ends together d. None of these

2)Each pass through a loop is called a / an

a) Enumeration

b) Iteration

c) Culmination

d) Pass through

3)Which of the following is correct about *while* loop?

(a) it is mostly used for fixed number of iterations

(b) cannot contain a jump statement inside it

(c) body of this loop executes at least once

(d) it is used for repeated execution of a statement or a set of statements in Java.

4)How many times will the following loop execute?

```
int count = 10;
while(++count  < 20)
{
    System.out.println(count + 1);
}
```

(a) 8

(b) 10

(c) 9

(d) 11

5)What will be the output of the following snippet

```
int x = 2; int y = 0;
for ( ; y < 10; ++y)
{
    if (y % x == 0)
        continue;
    else if (y == 8)
        break;
    else
        System.out.print(y + " ");
}
```

a) 1 3 5 7 b) 2 4 6 8 c) 1 3 5 7 9 d) 1 2 3 4 5 6 7 8 9

SECTION B (45 Marks)

Attempt ***any three*** questions from this Section.

The answers in this Section should consist of the ***Programs in either Blue J environment or anyprogram environment with Java as the base.***

Each program should be written using ***Variable descriptions/Mnemonic Codes*** *so that the logicof the program is clearly depicted.*

Flow-Charts and Algorithms ***are not required.***

Question 2

Write a program to input a number and check whether it is a Munchausen number or not.

A number which is equal to the sum of its digits raised to power equal to that digit,(the number should not have 0 as any of its digit)

Example

$3435=3^3+4^4+3^3+5^5$

Question 3

Write a program to print all possible Strontio numbers.

Strontio numbers are those four digits numbers when when multiplied by 2 gives the same digit at the hundreds and tens place.

Example: 1001,2222

Question 4

Using the switch statement, write a menu driven program to perform followingoperations:

(i) To Print the value of Z where $Z = \frac{x^3 + 0.5x}{Y}$ where x ranges from – 10 to 10 with an increment of 2 and Y remains constant at 5.5.

(ii) To print the Floyds triangle with N rowsExample: If N = 5, Output:

1

2 3

4 5 6

7 8 9 10

11 12 13 14 15

Question 5.

Write a program to accept a number and check and display whether it is a spy numberor not. (A number is spy if the sum of its digits equals the product of its digits.) Example: consider the number 1124,

Sum of the digits = 1 + 1 + 2 + 4 = 8

Product of the digits = 1 × 1 × 2 × 4 = 8