

# ***City International School***

## **FIRST TERMINAL EXAMINATION – 2015 - 2016**

**Date : 01/08/2015**

**Marks : 100**

**Std : X**

**Subject : Computer Applications**

**Time : 2 hrs**

The first fifteen minutes are to spent on reading the paper.

The time mentioned above is the time to write the paper.

This paper consists of 2 pages the paper is divided in two sections.

Answer all questions from section A and section B.

Section A is of 40 marks and section B is of 60 Marks.

Marks of questions are given in brackets ( ).

### **SECTION – A (40 MARKS)**

Attempt all the questions from this section.

#### **Q. 1 Answer the following questions.**

- a. Name any four tokens of Java. (2)
- b. 'Class is called an object factory'. Explain. (2)
- c. What is an identifier? (2)
- d. Define the terms. (i.) Source code (ii.) Machine code (4)

#### **Q. 2 Answer the following questions.**

- a. What will be the output of the following, if x = 5 initially? (2)
  - i.  $5*++x$  ii.  $5*x++$
- b. Explain with the help of an example the purpose of default in Switch statement. (2)
- c. What do you mean by a package? Give three examples. (2)
- d. What is an Exception Handling? State one advantage of Exception handling. (2)
- e. Differentiate between linear search and binary search. (2)

#### **Q. 3 Answer the following questions.**

- a. What is Selection sort technique? (2)
- b. Rewrite the following using the Ternary Operator: (2)  
if(income <= 10000) tax = 0; else tax = 12;
- c. Write the corresponding expressions for the following mathematical functions: (2)
  - i.  $a^2 + b^2$  ii.  $z = x^3 + y^3 - xy/z$
- d. What do you mean by JVM? (2)
- e. How comments are shown in Java? (2)

**Q. 4 Answer the following questions.**

- a. Define Fall –Through in Java with an example. (2)
- b. Define an empty loop. Give an example. (2)
- c. What do you mean by subscript? Give an example. (2)
- d. If  $m = 5$  and  $n = 2$  output the values of  $\underline{m}$  and  $\underline{n}$  in: (2)
  - i.  $m - = n;$  ii.  $n = m + m/n;$
- e. How do we declare a single dimensional array? (2)

**SECTION – B (60 MARKS)**

Attempt any four questions from this section.

- Q. 5** Write a program in Java to enter a number and check whether the number is an Armstrong or not. (15)  
Sample input: 153  
Sample output: 153 is an Armstrong number because  $1^3 + 5^3 + 3^3 = 153$
- Q. 6** Write a program in Java to display the first 10 numbers of the Fibonacci series (15)  
0, 1, 1, 2, 3, .....
- Q. 7** Write a class with name employee and basic as its data member. Find the gross pay of an employee for the following allowance and deduction. (15)  
Use meaningful variables:  
Dearness Allowance = 25% of Basic Pay  
House Rent Allowance = 15% of Basic Pay  
Provident Fund = 8.33% of Basic Pay  
Gross Pay = Basic pay + Dearness Allowance + House Rent Allowance  
Net Pay = Gross Pay – Provident Fund
- Q. 8** Write a program in Java to enter a number and check whether the number is a palindrome or not. (15)  
Sample input: 232  
Sample output: 232 is a palindrome
- Q. 9** Write a pro ram in Java to display the color of the spectrum (VIBGYOR) (15)  
according to the User's choice.