

City International School

FIRST TERMINAL EXAMINATION – 2013 - 2014

Date : 03/08/2013

Marks : 100

Std : X

Subject : Computer Application

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 5 pages the paper is divided in two sections.

Answer all questions from section A and any 4 from 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)

Q. 1 Answer the following questions.

(10)

- a. Define Encapsulation.
- b.
 - i. State two features of a constructor.
 - ii. What is the role of keyword 'void' in declaring functions?
- c. How are the following passed?
 - i. Primitive Types
 - ii. Reference Types
- d. Define variable with an example.
- e. Define the following with an example each.
 - i. An object
 - ii. A class

Q. 2

(10)

- a. What do the following mean?
 - i. Flower rose = new Flower ();
 - ii. Employee Staff = new Employee ();
- b.
 - i. State 2 kinds of Data Types
 - ii. Give the prototype of a function
Search which receives a sentence sentnc and a word wrd and returns 1 or 0
- c. What will be the output if x = 5
 - i. 5 * ++ x
 - ii. 5 * x ++
- d. Perform the following.
Assign the value of Pi (3.142) to a variable with the requisite data type.
- e. Give an example to explain Data Absteaction.

Q. 3**(20)**

- a.
 - i. Name two different types of expressing a comment in Java Programming (2)
 - ii. Name two types of Java Programs
- b. An object is referred to as an instance of a class. Explain with example. (2)
- c. What does the token 'Keyword' refer to, in the context of Java? Give an example for keyword. (2)
- d. Explain with an example the if – else – if construct. (4)
- e. What is inheritance? What type of inheritance is possible in Java? Write a program to show the concept of inheritance. (4)
- f. Why do we need a constructor as a class member? (2)
- g.
 - i. What are the two ways of invoking a function? (2)
 - ii. Convert the following segment into an equivalent for 100p.

```
{  
  Int i ; i = 0 ;  
  while (i <= 20)  
    system . out . print in (i + " ");  
  i ++ ;  
}
```
- h. Explain the function of each of the following with an example. (2)
 - i. break;
 - ii. continue;

SECTION – B (60 MARKS)

- Q. 4** a. What do you understand by Java Reserved words? Name 5 commonly used. Java Reserved Words. (5)
- b. Write a Program to accept a number from the user and print whether it is armstrong or not (10)
- Q. 5** a. Differentiate between if and switch statements. (10)
- b. Design a class to overload a function num _ calc () as follows.
 - i. void num _ calc (int num, char ch), argument, compute the square of integer argument if choice ch is 's', otherwise find its cube.
 - ii. void num _ calc (int a , int b, char ch), with 2 integer arguments' and one character argument, it computes the product of integer arguments if ch is 'p', else adds the integers.

- Q. 6** a. Differentiate between pure and impure functions. (5)
- b. i. State one similarity and one difference between while loop and for loop (10)
- ii. Analyze the following program segment and determine how many times the body of loop will be executed (show the working)
- ```
x = 5; y = 50;
while (x <= y)
{
 y = y/x;
 system . out . println (y);
}
```
- iii. Convert the following segment into an equivalent do – while loop
- ```
int x, c;
for (x = 10; c = 20; c > 10; c = c - 2)
    x ++ ;
```

- Q. 7** Write a program with class name as employee and basic as its data member, to find the gross pay of an employee for the following allowances and deduction. (15)
- Use meaningful variables.
- Dearness Allowance = 25% of Basic Pay
- House Rent = 15% of Basic Pay
- Provident Fund = 8.33% of Basic Pay
- Net Pay = Basic Pay + Dearness Allowance + House Rent Allowance
- Gross Pay = Net Pay – Provident Fund

- Q. 8** A cloth showroom announced the following festival discounts on the purchase of items, based on the total cost of the items purchased. (15)

Total Cost	Discount in Percentage
Less than Rs. 2000	5%
Rs. 2001 to Rs. 5000	25%
Rs. 5001 to 10,000	35%
Above Rs. 10,000	50%

Write a program to input the total cost and to compute and display the amount to be paid by the customer after availing the discount.