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SECOND PRELIMINARY EXAMINATION 2012-2013  
COMPUTER APPLICATIONS  
TYPE B

STD:X  
DATE:

MM:100  
TIME: 2HRS

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*This paper is divided into two sections. You are to answer all questions from Section A and only four questions from Section B. The intended marks for questions or parts of questions are given in brackets.*

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Section A  
[attempt all questions]

Question 1.

- a. Define Scanner classes. [2]
- b. Name the following: [2]
  - i. Numbers which are represented without decimal points in Java.
  - ii. Also referred to as Floating-point constants.
- c. Distinguish between Separators and Identifiers. [3]
- d. State and explain the function of the New operator. [3]

Question 2.

- a. Explain Parameterized constructors. [2]
- b. Explain why Access specifiers are also referred to as visibility modes. [2]
- c. Name the two most important Access specifiers in Java programming. [2]
- d. What is the use of 'this keyword' in Java programming? [2]
- e. Assign the value of pie (i.e. 2.00) to a variable with requisite data type. [2]

Question 3. State the reason for the following: [10]

- a. Member methods are common to all the objects within the class.
- b. Function overloading reduces the tediousness of programming.
- c. JVM is the most important feature of Java.
- d. Java is platform neutral.
- e. Use of type casting becomes essential during programming process.

Question 4. Briefly explain the following: [10]

- a. Polymorphism
- b. Formal Parameters
- c. Actual Parameters
- d. Inheritance
- e. Strings

**SECTION B**

**[Question 5 is compulsory attempt any three more questions. Each question carries 15 marks]**

**Question 5.**

Define a class Security having the following descriptions:

Data members	String n	To store name
[instant variables]	int h	To store number of hours for which wages are to be paid
	double r	To store rate of the wages
	double w	to calculate the wages

Member functions:

get() :store name, rate and number of hours  
 calwage() :calculate the wages of an employee  
 display() :output details of an employee

However, the security is not allowed to work for more than 70 hours a week. Write a program to compute the wages according to the given conditions and display the output.

Number of Hours	Rate
upto 40 hours	Rs. 'r' per hour
for next 20 hours	Rs. 1.5'r' per hour
for next 20 hours	Rs. 2.0'r' per hour

**Question 6.**

Write a program to accept 20 different names in a SDA and then perform Binary Search to check whether a particular name is present in it or not.

**Question 7.**

Write a METHOD to accept a number from the user and then check whether the number is a Palindrome number or not. A Palindrome number reads the same forward and backward.

**Question 8.**

Write a program to store numbers in a square matrix of 4\*4. Find the sum of the members of each row and sum of each column of the matrix by using assignment statement.

**Question 9.**

Write a program to accept a string and then display the string after reversing each character of the words present in it.

Sample: This is good

O/P : sihT si doog

**Question 10.**

Write a program in Java to accept a name and then display the surname followed by the first and middle names.

Eg. MOHANDAS KARAMCHAND GANDHI

O/P GANDHI MOHANDAS KARAMCHAND