

ATUL VIDYALAYA
SECOND PRELIMINARY EXAMINATION 2012-2013
COMPUTER APPLICATIONS
TYPE A

STD:X
DATE:

MM:100
TIME: 2HRS

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.

Section A
[attempt all questions]

Question 1.

- a. Explain the term Polymorphism. [2]
- b. Name the following: [2]
 - i. the act representing essential features without including background details.
 - ii. the process by which objects of one class can link and share some common properties of objects from another class.
- c. Distinguish between While and Do while loops. [3]
- d. State and explain the function of the For loop. [3]

Question 2.

- a. Explain in detail the different ways of passing values to a method. [2]
- b. State with example the difference between = and == [2]
- c. Name the two types of functions present in Java [2]
- d. What is an 'argument list' in Java programming? [2]
- e. Assign the value of pie (i.e. 3.142) to a variable with requisite data type. [2]

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

- a. Class is known as an object making factory
- b. Object is an instance of a class
- c. JVM deals with both compilers and interpreters
- d. Data hiding and Encapsulation are interlinked processes
- e. Arrays permit exclusive collection of data

Question 4. Briefly explain the following: [10]

- a. New operator
- b. Encapsulation
- c. Reusability feature
- d. Explicit type conversion
- e. Tokens

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

Question 5 .

XBC News Limited announces an increment of their employees on seniority basis as per following:

Age	Increment
56 years and above	20% of Basic
Above 45 and below years	15% of Basic
Up to	10% of Basic

Write a program to find new basic by using the following class specifications.

Class	Increment
Data members /Instance variables:	
String Name	Name of employee
Double basic	Basic pay of employee
Int age	Age of employee

Member Methods:

void getdata(String n, double b, int a: to accept name, basic, age

void calculate(): to find increment and update basic\

void display() : to display age and updated basic.

Question 6.

Write a program to accept 20 different names in a SDA and then perform Linear 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 neon number or not. A neon number is that where sum of cube of digits of a number is equal to the cube of number itself.

Question 8.

Write a program to create a square matrix of 4*4 and store numbers in it. The program should then perform a check to see if it's Symmetric or not. A square matrix is symmetric, if the elements of the i^{th} row and j^{th} column are equal to the elements of the j^{th} row and i^{th} column.

Question 9.

Write a program to accept a string and then display the word having the maximum length.

Question 10.

Write a program in Java to accept 5 names and THEN insert the middle name into the accepted string. Display the full name.

Eg.

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O/P Sachin Ramesh Tendulkar