Shri Vile Parle Kelavani Mandal`s
SHRI BHAGUBHAI MAFATLAL POLTYECHNIC
AUTONOMOUS SEMESTER EXAMINATION APRIL/MAY, 2016

TIME ALLOWED: 03 HOURS
MAXIMUM MARKS: 80

SEAT NO._____
SEMESTER: IV
COURSE: INFORMTION TECH.

SUBJECT: **PROGRAMME IN JAVA**

CODE: 120906

INSTRUCTIONS:

(1) Answer to the two sections must be written in separate answer books.
(2) Attempt ALL questions from Section-I and Section-II.
(3) Use of Mathematical and Steam tables and pocket calculator (non-programmable) is permissible.
(4) Illustrate your answers with neat sketches, wherever necessary.
(5) Figures to the right indicate full marks.
(6) Assume suitable additional data, if necessary.
(7) The student should read the name and code of the subject and confirm th... received is as per subject registered.

SECTION-I

Q.1 **Attempt Any Three of the following** **(12)**

(a) Differentiate between Java and C++
(b) Write a program to accept a password form the user and authenticate the user if password is correct.
(c) Describe abstract class with suitable example.
(d) Write stepwise procedure to create a user defined package.
(e) Describe the following with example
  (i) Variable
  (ii) Constant

Q.2 **Attempt Any Two of the following** **(12)**

(a) Differentiate between constructor and methods (any six points)
(b) Describe dynamic dispatch method with example.
(c) Describe substring ( ), concat ( ) and replace ( ) method of class String
(d) What is inheritance ? Describe `super` keyword with suitable example.

Q.3 **Attempt Any Two of the following** **(16)**

(a) Describe Access Modifiers with suitable examples.
(b) Differentiate between method overloading and method overriding (any eight points)
(c) What is an interface ? What is its need ? With suitable program describe the use of interface.

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SECTION-II

Q.4 **Attempt Any Three out of Five** **(12)**

(a) With respect of Event Delegation Model, give the meaning of following terms with suitable example :
   (i) Event class
   (ii) Source of Events
   (iii) Event Listeners

(b) Discuss various methods of Input Stream and Output Stream Classes.

(c) Explain priority structure and synchornization in multithreading

(d) Give the advantage of excepting handling. Also discuss various types of exceptions available in Java with appropriate example.

(e) Explain the working of following string methods:
   (i) charAt ( )
   (ii) index Of ( )
   (iii) To Char Array ( )

Q.5 **Attempt Any Two out of Four** **(12)**

(a) With appropriate Java program explain the process of creating our own exception class in Java.

(b) Compare buffered and non buffered I/o steams of Java. Also write a progam to copy the content of one file to other using buffered stream.

(c) Give the difference between a Java Applet and a Java Application. Explain the skeleton of Java Applet with one example program.

(d) Write a Java program to find out perfect square numbers between 1 to 2000. Complete this task by crating two threads in which first thread will find perfect square nos. between 1 to 1000 and other thread will find the perfect square nos. between 1001 to 2000.

Q.6 **Attempt Any Two out of Three** **(16)**

(a) Develop a Frame in Java having 3 text boxes and 4 buttons named "Add", "Sub", "Mul"and "Div" As the user inputs two nos. in the first and second text boxes and after clicking one of buttons, the result should be displayed in the third text box.

(b) With respect to exception handling concept explain the following concept with suitable example programs:
   (i) Finally
   (ii) Nested try
   (iii) Throws

(c) With example programs discuss various approaches to crate a thread in Java. Also give the functionally of the following Java methods:
   (i) join ( )
   (ii) notify ( )
   (iii) wait ( )

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