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SE-6851

B. E. III (Sem. V) (Information Technology) Examination

April / May – 2011

Java Programming

Time : **3** Hours] [Total Marks : **100**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **B. E. 3 (Sem. 5) (Information Technology)**

Name of the Subject :

☛ **Java Programming**

☛ Subject Code No. : **6 8 5 1** ☛ Section No. (1, 2,.....) : **1, 2**

Seat No. :

Student's Signature

(2) Answers to both the sections must be written in separate answer books.
(3) Figures to the extreme right indicate maximum marks.
(4) Support your answers with necessary diagrams.
(5) Assume suitable data, when necessary.

SECTION - I

1 (a) Given a statement, say whether it is True/False : **10**

(1) Java is a platrorm dependant language.
(2) Java is a robust language.
(3) Java supports multiple inheritances.
(4) Java applets are not secure.
(5) To refer to current object 'super' keyword is used.
(6) In java we can define constant via 'final' keyword.
(7) The finally block is executed when an exception is thrown, even if no catch matches it.
(8) "7xyz" is a valid identifier in Java.
(9) Data controlling the access to the code is approach of object oriented programming model.
(10) Java does not support multithreading.

(b) Explain the OOP principles in context with Java in detail. **05**

2 (a) Explain method overloading and method overriding with the help of an example in detail. **06**

OR

(a) (1) Write a Java program that prints all the prime numbers in the range 1 to 100. **04**

(2) Why Java is strongly typed language ? **02**

(b) Attempt the following (any three) : **09**

(1) Features of Java.

(2) Differentiate C++ and Java.

(3) Exception handling mechanism of Java.

(4) Explain the concept of interface in Java with the help of an example.

3 Attempt the following (any two) : **20**

(1) Create a queue class. This allows user to perform corresponding operations available in that data structure. And also create one more class which will create objects of queue class and perfroms the operations on that. All the classes should be in the same file.

(2) Write a Java program that takes 1 command line argument which specifies filename. Use Java IO Library to print the file's content of the standard output.

(3) Design an applet with one button and one textfield. Initially the button is labelled as YES. Clicking on the button the label should change to NO. When the label is NO and if we click it should changed to YES and this cycle should repeat continuously. The textfield displays the number of clicks been made.

SECTION - II

4 (a) Given a statement, say whether it is True/False : **10**

(1) An applet cannot have a main method.

(2) CardLayout is the default layout in an applet class.

(3) <link> tag is used to pass parameter to the applet from an html page.

(4) Abstract class is an instantible class.

(5) Applets can communicate with each other directly.

(6) Applets have the concept of constructors.

(7) Garbage collection in Java, guarantee that a program will not run out of memory.

(8) Java, lang, object is the base class for all classes.

(9) The code in finally block will execute even if an exception is occurred.

(10) If static modifier is removed from the signature of the main method, it does not throw any error.

(b) Write the code of passing parameters to an applet from an HTML page. **05**

5 (a) Explain Action Listener with an appropriate example. **06**

OR

(a) (1) Explain super, static and final keywords with appripriate example. **04**

(2) List all the attributes of HTML applet tag. **02**

(b) Write a Java Applet that has three textifields and a button. User is allowed to enter three integer values in three textfields. Upon clicking the button, that status bar of the applet window should display the maximum integer among the three. **09**

6 Attempt the following (any **two**) : **20**

(1) Create a Java Applet that draws Indian National Flag (with Ashok Chakra) in the applet window.

(2) Explain thread priority using appropriate example.

(3) Create an applet that sets the foreground and background colors and outputs a string "Welcome" on the screen.