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M.C.A. (Management)

IT 11 : JAVA PROGRAMMING

(2020 Pattern) (Semester - I)

Time : 2½ Hours]   *[Max. Marks : 50*

Instructions to the candidates :

   1) Attempt all questions.

   2) Figures to the right indicate full marks.

Q1) Each multiple choice question carries half marks. All questions are compulsory. **[10]**

  i) In java, array elements are stored in _____memory locations.

    a) Random   b) Sequential

    c) Sequential and Random   d) Binary search

  ii) _____method simply return a string that appropriately describes on object of your class.

    a) getchars( )   b) to string( )

    c) to Char Array( )   d) getstring( )

  iii) Package P1 contains the following code

    package 1;

    public class student

    {Body of student}

    class Test

    {Body of Test}

    Import P1.*;

    Class Result

    {student S1;

         Test t1;}

    This code not compile because.

P.T.O.

a) Class result should be declared public

b) Student class is not available

c) Test class is not available

d) Result body is not fully defined

iv) Which of the following class in Java. io package defines a method to delete a file.

a) Stack

b) File

c) String

d) Vector

v) For a valid file object reference, we can create a new file using the following classes defined in Java. io package

i) File output stream

ii) Random Access File

iii) Data Input

a) i and ii only

b) ii and iii only

c) i and iii only

d) All i ii and iii

vi) What type of servlet use these methods doGet(), doPost(), doHead(), doDelete(), doTrace()?

a) Generic servlet

b) Http servlets

c) All of the above

d) None of the above

vii) ITERATOR and LISTITERATOR can traverse over?

a) lists

b) HttpServlets

c) All of the above

d) None of the above

e) Set

viii) By convention, java packages begin with_____ letters while all the class names begin with an _____ letter.

a) uppercase, uppercase

b) lowercase, lowercase

c) uppercase, lowercase

d) lowercase, uppercase

ix) An _____is an incomplete class that requires further specification.

a) Abstract class

b) Final class

c) Static class

d) Super class

x) Which of the following sub-classes are included in object class in Java:

   i)   Dictionary   ii)   Date

   iii)   Label   iv)   Thread

   a)   i, ii and iii only   b)   ii, iii and iv only

   c)   i, iii and iv only   d)   i, ii and iv only

xi) Which of these is a mechanism for naming and visibility control of a class and its content?

   a)   Object   b)   Packages

   c)   Interfaces   d)   None

xiii) Which of this access specifiers can be used for a class so that its members can be accessed by a different class in the same package?

   a)   Public   b)   Protected

   c)   default   d)   No modifier

xiii) Order of enecution of constructions in Java Inheritance is

   a)   Base to derived class   b)   Derived to base class

   c)   Random order   d)   None

xiv) Which of the following is/are true statements?

   a)   A class can extend only one class but can implement many interfaces.

   b)   An interface cannot extend many interfaces.

   c)   An interface can implement another interface.

   d)   An interface can implement a class

xv) Which of the following is false statement about package in java?

   a)   Package are used for preventing naming conflicts.

   b)   Providing controlled access : Protected and default have package level access control.

   c)   Packages cannot be considered as data encapsulation.

   d)   None of these

xvi) Which of the following code is used to get an attribute in a HTTP session object in servlets

   a)   session. get Attribute (String name)

   b)   session. alter Attribute (string name)

   c)   session. update Attribute (string name)

   d)   session. set Attribute (string name)

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xvii) Which of the following are/is advantages of packages?

    a)   Classes, even though they are visible outside their package, can have fields visible to package only.

    b)   Packages avoid name classes

    c)   We can have classes that are used by the packages, but not visible outside

    d)   All statements are correct

xviii) The Java_____ specification defines an application programming interface for communication between the web server and the application program.

    a)   Servlet   b)   Server
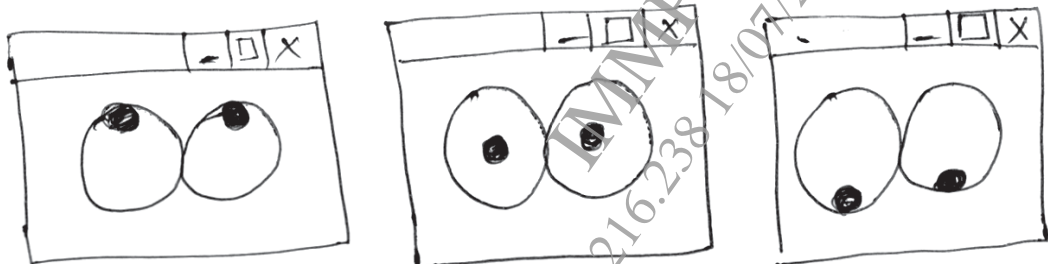
    c)   Program   d)   Randomize

xix) What happen in case of multiple catch block?

    a)   Either super or subclass can be caught first.

    b)   The super class exception must be caught first.

    c)   The super class exception cannot caught first

    d)   None of these

xx) Order of execution of constructors in Java inheritance is

    a)   Base to derived class   b)   Derived to base class

    c)   Random order   d)   None of these

Q2) a)   Write a panel class Eyepanel and any other classes you need, such as event depending on whether the mouse cursor is above, inside, or below the eyes. The following three screen shots show the eyes in each of three positions ;   **[7]**

b) Write a program to draw a house in Java. **[3]**

OR

a) Write a swing program for designing notepad and performing relevant actions like cut, copy, select all and etc. **[6]**

b) Write a program to design login form with proper validation. **[4]**

Q3) a) Design a following phone book application in JSP for accepting employee details like: first name, last name, city name and email Id and save it in database. Perform following operations :- **[8]**
   i) record in database
   ii) retrieve all records in database
   iii) update a record from database
   iv) delete a record from database

b) Differentiate between JSP and servlet. **[4]**

OR

a) Write a servlet program for accepting student detail. Display proper/ message if invalid data is intered like name left blank and negative phone number, using MgSQL store the values in the table stud (Name, Address, Phone, Email) if valid data is entered for all the fields and perform the various operations like Add, Delete, Next and previous. **[8]**

b) Explain types of driver in java. **[4]**

Q4) a) Differentiate between Array list and Linked list. **[5]**

b) Explain thread life cycle. **[3]**

OR

a) What is Hashing in collection Framework. **[5]**

b) Differentiate between run time and compile time polymorphism. **[3]**

Q5) a) How accessors and Mutators methods are used? **[4]**

b) What is thread synchronization? **[3]**

c) Write a Java program for mobile number validation using regex. **[3]**

OR

a) Explain shallow cloning and deep cloning. **[4]**

b) Explain how deadlock can be avoided in thread. **[3]**

c) What is object serialization? **[3]**

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