

## Scheme - I

### Sample Question Paper

**Program Name** : Computer Engineering Program Group  
**Program Code** : CO/CM/IF/CW  
**Semester** : Fourth  
**Course Title** : Java Programming  
**Marks** : 70

**22412**

**Time: 3 Hrs.**

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#### Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

#### Q.1) Attempt any FIVE of the following.

**10 Marks**

- a) Give syntax and example of following math functions.
  - i) `sqrt ()`
  - ii) `pow ()`
- b) Enlist access specifiers in Java.
- c) Name the methods from wrapper class for following task
  - i) To convert string objects to primitive int.
  - ii) To convert integer object to string object.
- d) State the use of static keyword
- e) Enlist any 4 keywords used for exception handling in Java.
- f) Give syntax of `<param>` tag to pass parameters to an Applet.
- g) Give any two methods from File class with their usage.

#### Q.2) Attempt any THREE of the following.

**12 Marks**

- a) Write a program to find largest between two numbers using `'?:'` operator.
- b) Define class Student with suitable data members create two objects using two different constructors of the class.
- c) Describe life cycle of thread with suitable diagram.
- d) Write a program to copy content of one file into another file.

#### Q.3) Attempt any THREE of the following.

**12 Marks**

- a) Write a program to divide any positive even integer by 2 using bitwise shift operator.
- b) State need of interface with suitable examples.

- c) Give usage of following methods :
- i) drawOval()
  - ii) getFont()
  - iii) drawArc()
  - iv) getFamily()
- d) Enlist types of stream classes and describe methods for reading and writing data for each type.

**Q.4) Attempt any THREE of the following.**

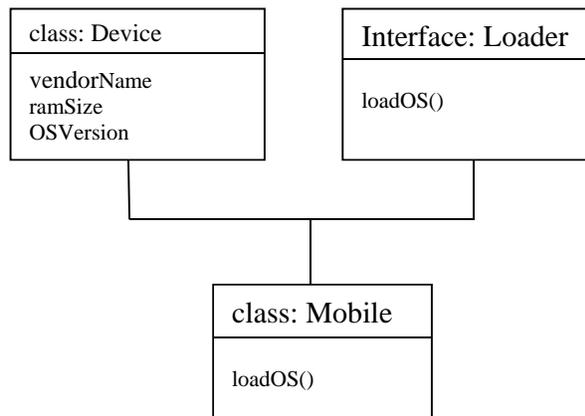
**12 Marks**

- a) Describe types of variables in Java with their scope.
- b) Write a program to initialize object of a class student using parameterized constructor.
- c) Write a program to create package *Math\_s* having two classes as addition and subtraction. Use suitable methods in each class to perform basic operations.
- d) Differentiate between Java Application and Java Applet (any 4 points)
- e) Write a program to count number of words from a text file using stream classes.

**Q.5) Attempt any TWO of the following.**

**12 Marks**

- a) Write a step to declare and define two and three dimensional arrays of a class.
- b) Implement following inheritance:



Display details of devices from loadOS() method of class Mobile.

- c) Write a program to define two threads for displaying even and odd numbers respectively with a delay of 500 ms after each number.

**Q.6) Attempt any TWO of the following.**

**12 Marks**

- a) Write a program to define class Employee with members as id and salary. Accept data for five employees and display details of employees getting highest salary.
- b) Describe types of Errors and Exceptions in details.
- c) Design an Applet to pass username and password as parameters and check if password contains more than 8 characters.

## Scheme – I

### Sample Test Paper - I

**Program Name** : Computer Engineering Program Group  
**Program Code** : CO/CM/IF/CW  
**Semester** : Fourth  
**Course Title** : Java Programming  
**Marks** : 20

**22412**

**Time: 1 Hour**

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#### Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

#### Q.1 Attempt any FOUR.

**08 Marks**

- a) List relational operators in Java.
- b) Give use of 'this' keyword in Java with suitable example.
- c) Give features of members and methods in an interface.
- d) Give syntax to create an object of a class with suitable example.
- e) Write any two differences between method overloading and method overriding.

#### Q.2 Attempt any THREE.

**12 Marks**

- a) Describe any four features of Java.
- b) Differentiate between String and StringBuffer class (Any 4 Points).
- c) Write a program to add 2 integer and 2 float objects to a vector and display them.
- d) Describe steps to create and access user defined packages.

## Scheme - I

### Sample Test Paper - II

**Program Name** : Computer Engineering Program Group  
**Program Code** : CO/CM/IF/CW  
**Semester** : Fourth  
**Course Title** : Java Programming  
**Marks** : 20

**22412**

**Time: 1 Hour.**

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#### Instructions:

- (1) All questions are compulsory.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data if necessary.
- (5) Preferably, write the answers in sequential order.

#### Q.1 Attempt any FOUR.

**08 Marks**

- a) Gives features of abstract class.
- b) Name any four built in Exceptions in Java.
- c) Write syntax and usage of following methods:
  - i) paint()
  - ii) getParameter()
- d) Describe any 4 attributes of <applet> tag.
- e) Write any two methods from Character Stream classes.

#### Q.2 Attempt any THREE.

**12 Marks**

- a) Describe methods of creating a thread with example.
- b) Describe Applet life cycle with diagram.
- c) Write a program to implement single level inheritance assuming suitable data.
- d) Write a program to design an Applet showing three concentric circles filled with three different colors.