



17515

15162

3 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) All questions are **compulsory**.
 - (2) Answer each next main question on a **new page**.
 - (3) Illustrate your answers with neat sketches **wherever necessary**.
 - (4) Figures to the **right** indicate **full marks**.
 - (5) Assume suitable data, if **necessary**.

Marks

1. a) Attempt **any three** of the following. **(3×4=12)**
- a) Describe any two relational and any two logical operators in Java with simple example.
 - b) What are stream classes ? List any two input stream classes from character stream.
 - c) Write general syntax of any two decision making statements and also give its examples.
 - d) Describe life cycle of thread.
- b) Attempt **any one** of following. **(1×6=6)**
- a) Explain following methods of string class with their syntax and suitable example.
 - i) substring ()
 - ii) replace ()
 - b) Write syntax of defining interface. Write any major two differences between interface and a class.
2. Attempt **any two** of the following. **(2×8=16)**
- a) Write a program to implement a vector class and its method for adding and removing elements. After remove display remaining list.
 - b) Describe with example how to achieve multiple inheritance with suitable program.
 - c) Write a simple applet program which display three concentric circle.
3. Attempt **any four** of following : **(4×4=16)**
- a) Define constructor. Explain parameterized constructor with example.
 - b) Write a program to check whether an entered number is prime or not.
 - c) Explain serialization with stream classes.
 - d) State syntax and explain it with parameters for :
 - i) drawRect ()
 - ii) drawOval ()
 - e) Describe use of 'super' and 'this' with respect to inheritance.

P.T.O.

**Marks**

4. a) Attempt **any three** of following. **(3×4=12)**
- a) Explain break and continue statements with example.
 - b) Describe use of 'throws' with suitable example.
 - c) State syntax and describe working of 'for each' version of for loop with one example.
 - d) State syntax and describe any two methods of map class.
- b) Attempt **any one** of following. **(1×6=6)**
- a) Write method to set font of a text and describe its parameters.
 - b) Describe final method and final variable with respect to inheritance.
5. Attempt **any two** of following. **(2×8=16)**
- a) What is thread priority ? How thread priority are set and changed ? Explain with example.
 - b) Write a program to input name and age of person and throws user defined exception, if entered age is negative .
 - c) Explain <applet> tag with its major attributes only. State purpose of get Available Font Family Name () method of graphics environment class.
6. Attempt **any four** of the following. **(4×4=16)**
- a) Define a class Item having datamember code and price. Accept data for one object and display it.
 - b) What is use of Array list class ? State any two methods with their use from Array List.
 - c) Design an Applet program which displays a rectangle filled with red color and message as "Hello Third year Students" in blue color.
 - d) Design a package containing a class which defines a method to find area of rectangle. Import it in Java application to calculate area of a rectangle.
 - e) Define a class having one 3-digit number as a data member. Initialize and display reverse of that number.
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