

Core Java

24.4.18

Q.P. Code: 36158



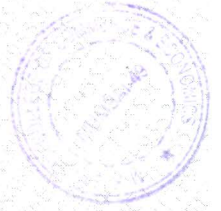
(Time: 2½ hours)

Total Marks: 75

- N. B.: (1) **All** questions are **compulsory**.
 (2) Makes **suitable assumptions** wherever necessary and **state the assumptions** made.
 (3) Answers to the **same question** must be **written together**.
 (4) Numbers to the **right** indicate **marks**.
 (5) Draw **neat labeled diagrams** wherever **necessary**.
 (6) Use of **Non-programmable** calculators is **allowed**.

1. Attempt **any three** of the following: 15
- Write a short note on Java Virtual Machine (JVM).
 - Write in detail about different types of operators in Java, category-wise quoting their functionality, operands and return type. Give one example statement for each.
 - What are the primitive data types in Java? Briefly explain their size, range and other details.
 - Explain the terms : narrowing, widening, instantiation, auto boxing.
 - Briefly explain: (i) Type annotations (ii) Lambda expressions.
 - List and explain the the salient features of Java.
2. Attempt **any three** of the following: 15
- Write a short note on access specifiers in Java.
 - Write a comparative note on overloading and overriding in Java.
 - Explain the functionality of different types of iterative statements in Java using suitable examples.
 - Explain : (i) Variable Arguments(Varargs) (ii) this.
 - Demonstrate the behavior of static members in Java using a suitable example.
 - Explain the semantics and functionality of the given statements :
 - Rectangle rec = new Rectangle(a,b);
 - break out;
 - public static void main(String arg[]) {.. }
3. Attempt **any three** of the following: 15
- Differentiate between abstract class abstract class and interfac in Java.
 - What is an inheritance? Explain multiple inheritance in Java.
 - Explain the terms/keywords : final , finally , finalize()

[TURN OVER]



- d. Explain the below given code and the concept(s) it represents :
- ```
Shape gen = new Shape();
Rect r = new Rect(); Circ c = new Circ();
int k = Integer.parseInt(args[0]);
if (k==1) gen = r; else gen=c;
gen.showdata();
```
- e. How do you create your own package and import it in a Java program? Explain the procedure step-wise using a suitable example.
- f. Explain the below given code fragments :
- interface values extends demoval { ... }
  - class sample extends dsamp implements dval { .. }

**4. Attempt any three of the following:**

15

- What is a vector? List out any five vector methods and quote their functionality. Write one example for each.
- Explain life cycle of thread with a neat labeled diagram.
- Explain any 3 different cases of exception handling.
- Explain the semantics and functionality of the given statements :
  - FileReader ins = new FileReader(inf);
  - dos.writeDouble(27.36);
- Explain the difference between the following using a suitable example.
  - equals() , compareTo() , equalsIgnoreCase()
  - substring(k) , substring(k , j)
  - IndexOf('x') , indexOf('x' , n);
- Explain :
  - int k = Integer.parseInt(num);
  - val = lval.longValue();
  - dval = Double.valueOf(s);

**5. Attempt any three of the following:**

15

- Briefly explain: delegation model, event, event listeners, and event sources.
- What is an Applet? Explain its life cycle in Java.
- What is a layout manager? Explain any two layouts.
- Write about: Button, Textfield, and Label controls.
- Explain the semantics and functionality of the given statements :
  - public void paint(Graphics g ) |{ ... }
  - b.addActionListener(this);
  - repaint();
- Explain <APPLET> and <PARAM> tags with their attributes.

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