

17515

15116

3 Hours / 100 Marks

Seat No.

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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.

Marks

1. (A) Attempt any **THREE** of the following :

3 × 4 = 12

(a) Explain any four features of Java.

(b) What is exception ? How it is handled ? Explain with suitable example.

(c) Describe break and continue statement with example.

(d) What are streams ? Write any two methods of character stream classes.

(B) Attempt any **ONE** of the following :

1 × 6 = 6

(a) What is package ? How to create package ? Explain with suitable example.

(b) State the use of 'super' and 'final' keyword w.r.t. inheritance with example.

2. Attempt any **TWO** of the following :

2 × 8 = 16

(a) Write a program to create a vector with seven elements as (10, 30, 50, 20, 40, 10, 20). Remove element at 3rd and 4th position. Insert new element at 3rd position. Display the original and current size of the vector.

(b) What is meant by an interface ? State its need and write syntax and features of an interface. Give one example.

(c) Write syntax and example of following Graphics class methods :

(i) drawOval()

(ii) drawPolygon()

(iii) drawArc()

(iv) drawRect()

P.T.O.

3. Attempt any FOUR of the following : 4 × 4 = 16

- (a) What is constructor ? Describe the use of parameterized constructor with suitable example.
- (b) Describe?, : (Ternary operator) in Java with suitable example.
- (c) What is the difference between array and vector ? Explain elementAt() and addElement() method.
- (d) Write any two methods of File and FileInputStream class each.
- (e) Write a program to design an applet to display three circles filled with three different colors on screen.

4. (A) Attempt any THREE of the following : 3 × 4 = 12

- (a) Write a program to check whether the entered number is prime or not.
- (b) Explain the following clause w.r.t. exception handling :
 - (i) try
 - (ii) catch
 - (iii) throw
 - (iv) finally
- (c) Explain any two bit-wise operators with example.
- (d) Explain all attributes available in < applet > tag.

(B) Attempt any ONE of the following : 1 × 6 = 6

- (a) Differentiate between applet and application and also write a simple applet which display message 'Welcome to Java'.
- (b) Describe the following string class methods with examples :
 - (i) length()
 - (ii) charAt()
 - (iii) CompareTo()

5. Attempt any TWO of the following : 2 × 8 = 16

- (a) Write a program to accept password from user and throw 'Authentication failure' exception if password is incorrect.
- (b) Explain life cycle of thread with a neat diagram.
- (c) How can parameters be passed to an applet ? Write an applet to accept user name in the form of parameter and print 'Hello < username >'.

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6. Attempt any FOUR of the following :

4 × 4 = 16

- (a) Explain method overloading with example.
 - (b) State any four system packages along with their use.
 - (c) What is use of ArrayList Class ? State any three methods with their use from ArrayList.
 - (d) Explain serialization in relation with stream classes.
 - (e) What is byte code ? Explain any two tools available in JDK.
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