21718

3 Hours / 100 Marks   Seat No. ☐☐☐☐☐☐☐☐

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.

                (6)   Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

                                                                Marks

1.   **(A)**   **Attempt any THREE of the following :**   **12**

        (a)   Define throws & finally statements with its syntax and example.

        (b)   Which are the restrictions present for static declared methods ?

        (c)   Explain any four features of java programming.

        (d)   Explain how interface is used to achieve multiple Inheritance in Java.

   (B)   **Attempt any ONE of the following :**   **6**

        (a)   Write a java program to implement visibility controls such as public, private, protected access modes. Assume suitable data, if any.

        (b)   With proper syntax and example explain following graphics methods :

            (1)   SetColor( )

            (2)   SetForeGround( )

            (3)   getFont( )

            (4)   setSize( )

2. **Attempt any TWO of the following :** 16

    (a) Write a java program to copy the content of the file "file1.txt" into new file "file2.txt".

    (b) Write a java program to implement multilevel inheritance with 4 levels of hierarchy.

    (c) Define applet. Write a program to create an applet to display message "Welcome to java applet".

3. **Attempt any FOUR of the following :** 16

    (a) Explain any four applet tag.

    (b) Which are the ways to access package from another package ? Explain with example.

    (c) Define a class and object. Write syntax to create class and object with an example.

    (d) With proper syntax and example explain following thread methods :

        (1) wait( )

        (2) sleep( )

        (3) resume( )

        (4) notify( )

    (e) What is type casting ? Explain its types with proper syntax and example.

4. **(A)** **Attempt any THREE of the following :** **12**

      (a)   State & explain scope of variable with an example.

      (b)   With syntax and example explain try & catch statement.

      (c)   Explain applet life cycle with suitable diagram.

      (d)   Explain byte stream class in detail.

    (B) **Attempt any ONE of the following :** **6**

      (a)   Write a java program to implement following functions of string :

           (1)   Calculate length of string

           (2)   Compare between strings

           (3)   Concatenating strings

      (b)   Write a java program to extend interface assuming suitable data.

5. **Attempt any TWO of the following :** **16**

    (a)   Write a java program to implement runnable interface with example.

    (b)   Write a java program to display all the odd numbers between 1 to 30 using for loop & if statement.

    (c)   Explain following methods for applet with an example :

        (1)   Passing Parameter to applet

        (2)   Embedding <applet> tags in java code.

6. **Attempt any FOUR of the following :** 16

   (a) Explain following bitwise operator with an example :

       (1) left shift operator

       (2) write shift operator

   (b) State & explain types of errors in Java.

   (c) Enlist types of constructor. Explain any two with example.

   (d) How to add new class to a package ? Explain with an example.

   (e) Explain Array list & Iterator methods of collections with an example.

   _____