

Total No. of Questions : 8]

SEAT No. :

P302

[Total No. of Pages : 2

[6003] - 381

T.E. (Electronics/E&TC)

FUNDAMENTALS OF JAVA PROGRAMMING

(2019 Pattern) (Semester - 1) (Elective - I) (304185 C)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to candidates:

- 1) Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, and Q.7 or Q.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

Q1) a) What is method overriding? Explain the rules to be followed while method overriding. **[9]**

b) Explain the concept of an array. How to declare an array in Java? Compare arrays in C and Java. **[9]**

OR

Q2) a) What is the meaning of inheritance in Java? Explain each type of inheritance with the help of suitable example and diagram. **[9]**

b) Write a Java program to implement multilevel inheritance with three levels of hierarchy. **[9]**

Q3) a) What is a Package in Java? With suitable example, explain various ways to access a package from another package. **[9]**

b) What is meant by an interface? What is the need of an interface in Java? Write syntax and features of an interface. **[8]**

OR

Q4) a) Explain various forms of implementing an interface in Java. How multiple inheritance is supported in Java? **[9]**

b) What are the advantages of packages in Java? List and explain various Java API packages. **[8]**

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- Q5)** a) What are the types of errors that occur in a Java program? Write a Java program to handle arithmetic exception. [9]
b) Explain life-cycle of a thread. What are the ways to create a thread in a Java program? [9]

OR

- Q6)** a) What are applets and applications in Java programming? Write a simple Java program for an applet. [9]
b) With reference to exception handling, explain the terms try, catch and throw. [9]
- Q7)** a) What are stream classes in Java? List and explain the methods of Byte Array Output Stream class. [9]
b) Write a Java program using Swing to create and display JTextArea on a JFrame. [8]

OR

- Q8)** a) What is AWT in Java? Explain the limitations of AWT. How events are handled in AWT components. [9]
b) Explain the methods of file input stream and file output stream classes in Java. [8]

