

Total No. of Questions : 8]

SEAT No. :

**PC2838**

[Total No. of Pages : 2

**[6352]-62**

**S.E. (Information Technology)**

**OBJECT ORIENTED PROGRAMMING**

**(2019 Pattern) (Semester - III) (214444)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, 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 a Constructor? State characteristics of the Constructor. [6]  
b) Differentiate between Constructor and Method. [6]  
c) Write Pseudo code for Constructor Overloading. [6]

OR

- Q2)** a) Explain different types of Constructors in OOP. [6]  
b) Differentiate between Constructor and Destructor. [6]  
c) Explain Automatic Garbage Collection in Java using the Finalize Method. [6]
- Q3)** a) Write a Java program to implement multilevel inheritance. [5]  
b) Explain types of polymorphism with examples. [6]  
c) What is an interface in Java? How to declare an interface, and write syntax? Can we achieve multiple inheritance by using an interface? [6]

OR

- Q4)** a) Differentiate between method overriding and method overloading. [5]  
b) Define Inheritance. What are the types of Inheritance? [6]  
c) How parameterized constructors get executed in multilevel inheritance? Explain with an example. [6]

**P.T.O.**

- Q5)** a) What is an exception? Demonstrate with the example, how to handle the ArrayIndex out of Bound exception? [6]
- b) Write the Java program to demonstrate at least 3 methods of ArrayList collection class. [6]
- c) What is Generic? Write the syntax for the Generic Method and explain the use of the Generic Method. [6]

OR

- Q6)** a) What is a checked exception? Show with the example, how to throw and handle the Arithmetic Exception manually. [6]
- b) Explain the use of throw, throws, and finally with the help of example. [6]
- c) Differentiate between ArrayList and LinkedList collection classes. [6]
- Q7)** a) Explain Various Types of Streams [6]
- b) Explain the singleton pattern with an example. [6]
- c) Write the syntactically correct Java program to copy the content of one file to another. [5]

OR

- Q8)** a) Explain the Iterator Pattern with its merits. [6]
- b) What are the advantages of design patterns? Explain the 'Adaptor' design pattern in detail. [6]
- c) Differentiate between sequential files and random-access files. [5]

