

Total No. of Questions : 8]

SEAT No. :

PD-4098

[Total No. of Pages : 2

[6402]-58

**S.E. (Information Technology)**  
**OBJECT ORIENTED PROGRAMMING**  
**(2019 Pattern) (Semester - III) (214444)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidate:*

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume Suitable data if necessary*

**Q1)** a) Write a program to create a class student with data members roll no, name & address. Initialize the values for data members using the constructor and display them. [9]

b) Explain the parameterized constructor with an example. [9]

OR

**Q2)** a) Explain constructor overloading with an example. [9]

b) What is the garbage collection and finalize ()method? [9]

**Q3)** a) Implement the following Inheritance

Class Employee is Super Class and Programmer is subclass. Employee class has data member salary of float data type. The programmer class has a data member bonus of integer data type. Access the salary of the Employee class from the Programmer class. [9]

b) Differentiate between compile time polymorphism and run time polymorphism. [8]

OR

**P.T.O.**

- Q4)** a) Define Interface. Explain how multiple inheritance is achieved in Java. [9]  
b) Illustrate Multilevel inheritance with an example. [8]
- Q5)** a) Write a Program to accept and display the month number. Throw a number format exception if an improper month number is entered. [9]  
b) Explain the exception handling mechanism with an example. [9]

OR

- Q6)** a) Write a Program to write a generic function & demonstrate swapping of multiple types of data using the same. [9]  
b) Define exception and Explain: [9]  
i) throws ii) finally  
iii) try iv) catch
- Q7)** a) Write a short note on: [9]  
i) Adaptor. ii) Singleton.  
b) What is a stream? Explain various stream classes in Java. [8]

OR

- Q8)** a) Explain the following File operations using File class: [9]  
i) Create a File ii) Read from a File  
iii) Write to a File iv) Close a File
- b) Implement a program for maintaining a database of student records using Files. Student has Student\_id, name, Roll\_no, Class, marks, and address. Display the data for a few students. [8]
- Create Database
  - Display Database
  - Delete Records
  - Update Record
  - Search Record.

