

Total No. of Questions : 8]

SEAT No. :

PE4289

[Total No. of Pages : 2

[6582]-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 indicates full marks.
- 4) Assume suitable data if necessary.

- Q1)** a) Explain constructor overloading with an example. [6]
b) Write a program to find the area and perimeter of a circle using a constructor. [6]
c) Write a short note on 'Copy Constructor' in JAVA. [6]

OR

- Q2)** a) What are the various types of constructors in JAVA? Explain anyone in detail with example. [6]
b) Explain the following terms : [6]
i) garbage collection
ii) finalize () method
iii) destructor
c) Design a class 'Complex' with data members for the real and imaginary part. Provide default and Parameterized constructors. Write a program in JAVA to perform the addition of two complex numbers. [6]

- Q3)** a) What is polymorphism? Explain compile time and run time polymorphism. [6]
b) What is an interface in Java? How to declare an interface and write a syntax with an example. [6]
c) Differentiate between compile time polymorphism and run time polymorphism. [6]

OR

- Q4)** a) Define multiple inheritance. How multiple inheritance is achieved in Java? [6]
b) Explain the constructor with a default argument with an example. [6]
c) Differentiate between method overriding and method overloading. [6]

P.T.O.

- Q5) a)** Write a Java program to accept the age of a person. If entered negative age throw user-defined exception "Negative age". [6]
- b)** Explain the following terms : [6]
- i) try
 - ii) finally
 - iii) throws
- c)** Explain the exception handling mechanism in Java with an example. [5]

OR

- Q6) a)** Explain : [6]
- i) ArrayList Class
 - ii) LinkedList Class.
- b)** Explain how user-defined exceptions can be handled. [6]
- c)** Write a program to write a generic function and demonstrate swapping of multiple types of data using the same. [5]

- Q7) a)** Define Stream. Enlist various Stream Classes in Java. Explain anyone in detail. [6]
- b)** Write a short note on : [6]
- i) Adaptor
 - ii) Singleton
- c)** Write a Java program to copy the content of the file "file1.txt" into a new file "file2.txt". [5]

OR

- Q8) a)** What is a design pattern? Enlist the types of design patterns. Explain anyone with an example. [6]
- b)** Implement a program for maintaining a database of employee records using Files. Employee has Emp_id, Emp_name, Emp_salary, Emp_designation. Display the data for a few employees. [6]
- Create Database
 - Display Database
 - Delete Records
 - Update Record
 - Search Record
- c)** Explain any three methods of the FileInputStream class with their syntax. [5]

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