

Total No. of Questions : 8]

SEAT No. :

PA-1245

[Total No. of Pages : 2

[5925]-268

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) Figurest to the right side indicate full marks.
- 4) Assume suitable data if necessary.

Q1) a) What is Constructor? What are the characteristics of the Constructor?
Explain Constructor Overloading with an example? [9]

b) Write a short note on : [9]

i) Garbage collection in Java

ii) Destructor in C++

OR

Q2) a) Design a class 'Complex' with data members for real and imaginary part. Provide default and Parameterized constructors. Write a program in JAVA to perform a **Subtraction** of two complex numbers. [9]

b) Discuss with example Dynamic initialization of object in Java. [9]

Q3) a) Define Inheritance. What are the types of Inheritance? How can you inherit a class in Java? [9]

b) What is polymorphism? Explain compile time and run time polymorphism. [8]

OR

Q4) a) Differentiate between method overriding and method overloading. Explain method overriding concept with an example. [9]

b) What is interface in java? How to declare an interface, write a syntax? Can we achieve multiple inheritance by using interface? Justify with an example. [8]

P.T.O.

- Q5) a)** What is an exception? Explain the following terms with respect to exception handling: [9]
- i) try
 - ii) catch
 - iii) throw
 - iv) finally
- b) Write a generic method to count the number of elements in a collection that have a specific properties like odd integers, prime numbers and palindrome. [9]

OR

- Q6) a)** Explain ArrayList class with an example. [9]
- b) Write a java program to accept and display the month number. Throw number format exception if improper month number is entered. [9]
- Q7) a)** Explain FileInputStream class. Write any four methods of File Input stream class with their syntax. [9]
- b) Explain following File operations using File class : [8]
- i) Create a File
 - ii) Read from a File
 - iii) Write to a File
 - iv) Close a File

OR

- Q8) a)** Write a short note on . [8]
- i) Iterator
 - ii) Singleton
- 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 few students. [9]
- i) Create Database
 - ii) Display Database
 - iii) Delete Records
 - iv) Update Record
 - v) Search Record

