

Vidya Vikas Mandal's
Shree Damodar College of Commerce & Economics, Margao-Goa
SY BCA, Semester – III, Semester End Examination, November 2022
Object Oriented Concepts (CAC 109)

Duration: 2 Hours

Max. Marks:60

Instructions:

- 1) All Questions are compulsory.
- 2) Start each question on a fresh page
- 3) Figures to the right indicate Full Marks.

- Q1)A. Define the following. 5x1=5 Marks
- a) Compile-time Polymorphism.
 - b) Abstract method
 - c) 'finally' block
 - d) Exception Handling
 - e) Encapsulation
- Q1)B. Answer the following in about 25 to 30 words. 5x1=5 Marks
- a) Describe Unary Association Relationship with the help of an example.
 - b) Explain Constructor Overloading?
 - c) Discuss the relevance of **super()** method in a child class?
 - d) Give two examples of Compile-Time errors?
 - e) Discuss whether or not a 'try' block can exist without a 'catch' block?
- Q2) Answer the following. 10 Marks
- A) Discuss any 2 features of Object-Oriented Programming. 2
 - B) Explain the concept of Inheritance using a suitable example. 3
 - C) Draw an Activity Diagram for Online Railway Reservation System. 5
- Q3) Answer the following. 10 Marks
- A) State the purpose of the finalize() method. 2
 - B) Illustrate using diagrams the concept of aggregation and composition 3
 - C) Based on the information given below draw the Class diagram along with appropriate multiplicity and relationships. 5
- A bank has many branches. In each zone, one branch is designated as the zonal head office that supervises the other branches in that zone. Each branch can have multiple accounts and loans. An account may be either a savings account or a current account. A customer may open both a savings account and a current account. However, a customer must not have more than one savings account or current account. A customer may also procure loans from the bank.*

- Q4) Answer the following. **10 Marks**
- A) Identify the various symbols and notations of an Use Case diagram. 2
- B) Explain with a diagram the notations used for representing the visibility of class members in a Class diagram. 3
- C) Draw an Use Case diagram for an Automated Trading House System. 5
The trading house has transactions with two types of customers, individual customers and corporate customers. Once the customer places an order, it is processed by the sales department and the customer is given the bill. The system allows the manager to manage customer accounts and answer any queries posted by the customer.
- Q5) Answer the following. **10 Marks**
- A) Differentiate between an Object and Class in Object Oriented Programming. 2
- B) List any 3 commonly used Java Exceptions and the types of exceptions handled by them. 3
- C) Explain Method Overloading with an example. 5
- Q6) Answer the following. **10 Marks**
- A) Explain using diagrams any 2 types of Inheritance. 2
- B) Differentiate between abstract class and concrete class. (3 points each) 3
- C) Discuss the purpose of an Interface with a suitable example. 5