Saraswat Vidyalaya's
Sridora Caculo College of Commerce & Management Studies
B.C.A. Semester III End Examination, November 2022

CAC-109 : OBJECT ORIENTED CONCEPTS

Duration: 2 hours   **Total Marks:** 60   **Total No. of Pages**: 2

Instructions*: i) All questions are **compulsory**.*
*ii) Figures to the right indicate **full marks**.*

Q1. A. Give one word for the following   (5 × 1 = 05)

   I. It is a type of interaction diagram because it describes how and in what order a group of objects works together.

   II. Diagrams that describes the high-level functions and scope of a system.

   III. This is basically a flowchart to represent the flow from one activity to another activity.

   IV. This diagram can be used to show the classes, relationships, interface, association, and collaboration.

   V. It is an event that disrupts the normal flow of the program.

Q1. B. Define the following   (5 × 1 = 05)

   I. Polymorphism

   II. Dynamic Binding

   III. Abstract Method

   IV. Hierarchical Inheritance

   V. Aggregation

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Q.2.A. State any two points of difference between Java Constructor and Java Method. (02)

B. What are private, public and protected members in Java? (03)

C. Draw a sequence diagram for online pizza ordering system. (05)

Q.3.A Why do we need an abstract class? (02)

B. Write a short note on multilevel inheritance in Java. (03)

C. Showing three swimlanes, draw an activity diagram for an employee management system. (05)

Q.4.A. State any two points of difference between method overriding and method overloading. (02)

B. Explain the three types of states in the state-chart diagram. (03)

C. Draw a Class Diagram, showing a bank having customers and staff working in the bank. Customers have accounts in the bank and they can borrow loan from the bank. The bank has an ATM, which is used by the customers. Draw the diagram showing all classes, relationships, attributes, operations, multiplicity, etc. (05)

Q.5.A. Explain the purpose of an Object Diagram. (02)

B. Explain any three types of exceptions in Java. (03)

C. Draw a state-chart diagram for an Airport check-in system. (05)

Q.6.A. Explain Java Copy Constructor with an example. (02)

B. Hybrid inheritance is a combination of hierarchical and single inheritance. Explain with an example. (03)

C. Draw an Object diagram for Hospital Management system, showing all the objects, relationships, attributes, etc. (05)