

Vidya Vikas Mandal's  
Shree Damodar College of Commerce & Economics, Margao-Goa  
S.Y.BCA, SEM III, MAY/JUNE SUPPLEMENTARY EXAMINATION 2017

**OBJECT ORIENTED CONCEPTS (BCA 301)**

**Duration: 2 Hours**

**Max. Marks: 50**

**Instructions:**

- Figures to the right indicate maximum marks.
- Start each question on a fresh page
- All questions are compulsory

**Q. 1) Define the following terms with an example.**

**(10 marks)**

- |                   |                         |
|-------------------|-------------------------|
| a) Interface      | d) Generic Class        |
| b) Aggregation    | e) Class level variable |
| c) Abstract Class |                         |

**Q. 2) Answer the following.**

**(10 marks)**

- |   |     |
|---|-----|
| a) How reusability is achieved in Object Oriented Programming?                                      | (2) |
| b) Explain why Object Oriented Programming is better than Procedure Oriented Programming?           | (3) |
| c) Identify classes, their attributes, and their behaviors from the problem statements given below. | (5) |

Point-of-sale software records all the purchases. Through the software, Customers makes purchases. The system stores customers' name, date of birth, address, and phone number. The system has the facility to update phone number and the address. The customers can be either walk-in customer or member customer. Member customer has membership id while walk-in customer doesn't has any such id.

It records purchase date, total items purchased and net amount payable. Purchases have amounts equal to the sum of the prices of the items sold. The system stores the information about the items which includes item id, type, price, and descriptions. The information about the items is updated time to time.

**Q. 3) Answer the following.**

**(10 marks)**

- |  |     |
|--|-----|
| a) Define class and object.  | (2) |
| b) Consider two classes, <i>House</i> and <i>Room</i> . In two ways you can establish relationship among these classes, either using <i>aggregation</i> or <i>composition</i> . Which relation you think is best suitable and why? | (3) |
| c) What do you mean by constructors and why it is used in Object Oriented Programming? Explain different types of constructors using suitable examples.  | (5) |

**P. T. O.**

**Q. 4) Answer the following.**

**(10 marks)**

- a) What is the use of *new*, *extends*, *implements* and *super* keywords in Object Oriented Programming. (2)
- b) Explain method overloading using an example. (3)
- c) Explain the concept of *Multi-level* and *Hierarchical inheritance* with examples and neat diagram of each type. (5)

**Q. 5) Answer the following.**

**(10 marks)**

- a) Define Streams and mention its types. (2)
  - b) Which method you will used to (3)
    - i. Print the output on the console / terminal screen in java programming language.
    - ii. To create New File in java programming language.
    - iii. Read contents from the BufferedStream in java programming language.
  - c) Differentiate between checked and unchecked exception. Through an example show the use of try, catch, and finally block in handling exception. (5)
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