

Vidya Vikas Mandal's
Shree Damodar College of Commerce & Economics, Margao-Goa
S.Y.BCA, SEM III, END SEMESTER EXAMINATION, OCTOBER 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)

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|------------------------|---------------------------|
| A. Function Overriding | D) Procedural Programming |
| B. Aggregation | E) Generic Variable |
| C. Instance Variables | |

Q. 2) Answer the following.

(10 marks)

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|-----------------------------------------------------------------------------------------------------|-----|
| A. How encapsulation is achieved in Object Oriented Programming? | (2) |
| B. What are the benefits of Object Oriented Programming? | (3) |
| C. Identify classes, their attributes, and their behaviors from the problem statements given below. | (5) |

The college has a library management system which is used by the librarian to keep track of books, library members and the borrowing of the books.

There are 2 types of library members, students and faculty members. Faculty members can borrow 3 books at a time while students can borrow 5 books. While returning books the fine is calculated. When books is issued and return the email is sent to the users.

The system stores the book id, name, author, no. of copies and category information about each book that is available in the library. It also maintains the name, id, email id, and contact no. of borrowers.

P.T.O.

- Q. 3) Answer the following. (10 marks)**
- A. Which type of Stream is used to read and write (2)
 - i. A image file
 - ii. A word file
 - B. Whether the instance of abstract class can be created? Why or why not? (3)
 - C. Explain polymorphism with an example. Which concept is used to achieve: (5)
 - i. Static Polymorphism
 - ii. Dynamic Polymorphism
 - iii. Multiple Inheritances in Java.

- Q. 4) Answer the following. (10 marks)**
- A. Explain composition with an example. (2)
 - B. What is the use of *new*, *extends*, and *super* keywords in Object Oriented Programming? (3)
 - C. Explain with examples the concept of *Multiple* and *Hierarchical inheritances* with neat diagrams. (5)

- Q. 5) Answer the following. (10 marks)**
- A. Define generic class with an example. (2)
 - B. What do you mean by streams in java? Which method you will use to (3)
 - i. Print the output on the console / terminal screen in java programming language
 - ii. To create New File in java programming language.
 - C. Define Exception and its types. What will happen if the exception thrown is not caught? What is the use of *finally* block in exception handling? (5)
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