

GANPAT UNIVERSITY
B. Tech. Semester: VI Electronics & Communication Engineering
CBCS Regular Examination April – June 2015
2EC606 Elective-Object Oriented Programming

Time: 3 Hours

Total Marks: 70

- Instructions:**
1. Attempt all questions.
 2. Answers to the two sections must be written in separate answer books.
 3. Figures to the right indicate full marks.
 4. Assume suitable data, if necessary.

Section – I

- Que. 1** (a) Provide a detailed explanation on 3 basic principles of OOP. 6
 (b) Define and differentiate local variable, instance variable and class variable. Use suitable example to support your answer. 6
- OR**
- Que. 1** (a) Explain following features of Java: 6
 1. Compiled and interpreted 2. Robust and secure
 3. Dynamic and extensible. 4. Multithreaded 5. Distributed
 (b) How java achieves platform independence? What is the role of Java Virtual Machine? 6
- Que. 2** (a) Explain 'this' and 'super' keywords with example. 6
 (b) Describe inheritance in java with its possible types. Write an example code for multilevel inheritance. 5
- OR**
- Que. 2** (a) Briefly describe the use of following keywords 6
 a. final (method/class/variable) b. finally c. finalize()
 (b) Differentiate method overriding and method overloading with example. 5
- Que. 3** (a) Create a class called Book having, 6
Attributes: Title, price_rs, year_of_pub, no_of_pages and rating (out of 5)
Behavior: setValues(), getRating(), updateRating(float), printAll().
 In an application class, create 3 objects of such book and print the details of book which has maximum rating among three.
Hint: Wings of Fire, 250.00, 1999, 180, 4.2
 (b) Create a class called **Box** which has, 6
Variables: length, width and height
Methods : setValues(), constructors,
 printApplication() whose definition is not known as for now,
 printDetails() whose functionality must not change in future.
- Create a class called **Magic_Box** from **Box** and use it in your application.

Section – II

- Que. 4 (a) Explain Vector class in detail with example. 6
 (b) Compare String and StringBuffer classes. 6
- OR
- Que. 4 (a) Enlist the steps of exception handling in java. Write a program that demonstrates `ArrayIndexOutOfBoundsException` exception. 6
 (b) How does an abstract class differ from interface? Explain. 6
- Que. 5 (a) Give a brief note on – *Two ways of creating threads in java.* 5
 (b) Enlist frequently used Java API packages and describe them. 6
- OR
- Que. 5 (a) How java threads manage to run parallel? Draw life cycle of thread. 5
 (b) Explain a process of generating your own exception. Write code to generate your own `emailException` if user's email id does not end with string "`@gmail.com`". 6
- Que. 6 (a) Explain following methods in an applet with their parameters. 4
 1. `drawstring()`
 2. `setBackground()`
 3. `showStatus()`
 4. `fillOval()`
- (b) Write a program for designing an applet having three text boxes Red, Green and Blue with default background as yellow. User can enter integer values in them ranging from 0 to 255. On pressing 'Q' button on keyboard, an applet background color is painted again based on values present in the box. 8

END OF PAPER