Hall Ticket No | | | | | | | | | | | Question Paper Code: ACS003

INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech IV Semester End Examinations (Supplementary) - July, 2018

Regulation: IARE – R16

OBJECT ORIENTED PROGRAMMING THROUGH JAVA

Time: 3 Hours **(IT)** **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

UNIT – I

1. (a) What are class and object? Give the syntax for class and object creation. **[7M]**
   (b) Create a class Student with rno, name, branch. **[7M]**
      i. Include a parameterized constructor to initialize Student objects.
      ii. Include a static method which accepts an array of students and prints them.
      iii. Write a test program to create an array of students and then call the above method to print them.

2. (a) What are static fields and methods? Write an example code snippet for the same. **[7M]**
   (b) Create a class Employee with fields name, designation and salary. **[7M]**
      i. Include a parameterized constructor to initialize the object.
      ii. Include overloaded method to hike the salaries of employee. Salary hike can be specified by an amount or percentage.
      iii. Write a test program to create few employee objects and invoke above mentioned methods.

UNIT – II

3. (a) What is Inheritance? Write a program for achieving multilevel inheritance. **[7M]**
   (b) What is the significance of abstract keyword? Explain with an example program and also how it is different from a final keyword. **[7M]**

4. (a) What is a package? Create one class in one package and one interface in another package and show how they can be utilized in a target main class. **[7M]**
   (b) What is method overriding? Write one example program for it also targets runtime polymorphism. **[7M]**

UNIT – III

5. (a) What is an exception? Explain the key words that are going to be used while doing exception handling. **[7M]**
   (b) Explain the situations where multiple exception handling will be done, and also explain the role of Exception class in those situations. **[7M]**

6. (a) What are the various methods of handling multithreading? Explain with proper code segments. **[7M]**

   (b) What is thread prioritization and synchronization? Explain with examples. **[7M]**

UNIT – IV

7. (a) What is the significance of BufferedReader/Writer classes? Explain with the help of example File operations. **[7M]**

   (b) Write a program that analyzes number of alphabets, numbers, special symbols, lines and words in a file. **[7M]**

8. (a) What are the various steps involved while implementing a JDBC program? Explain with proper code segments. **[7M]**

   (b) Write a program that inserts some records of students into Student table containing the details RollNumber (varchar), Name (varchar), MobileNumber (number) and Percentage (number (4, 2)) using prepared statement. Also display the student records who got first rank in the class. **[7M]**

UNIT – V

9. (a) What is an Applet? Create a sample applet program that displays a message **[7M]**

   (b) Explain any five AWT(Abstract Window Toolkit) components. **[7M]**

10. (a) Explain Border and GridLayout Managers with proper syntax. **[7M]**

    (b) What is JPanel? Explain the significance of multiple panels while designing a user interaction window. **[7M]**