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INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech IV Semester End Examinations (Regular / Supplementary) - May 2019
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) Develop a java program to differentiate static variable and non static variable, static method and non static method. [7M]
- (b) Write a java program taking instance variables area and volume as private, compute area and volume in one class and print the area and volume in another class. Prepare getArea() and getVolume() methods. Read all three dimensions using constructor only. [7M]
2. (a) Explain ‘this’ keyword and garbage collection in Java. [7M]
- (b) Write a java program that finds the smallest of several integers. Assume that the first value read specifies the number of values to input by the user. [7M]

UNIT – II

3. (a) What is an interface? In what way it is different from class? Explain the similarities between classes and interfaces. [7M]
- (b) Create a class within the package “AmountInWords” to convert the amount into words. (Consider the amount to be not more than 100000.) [7M]
4. (a) What is a package? Create a simple package and describe its usage? [7M]
- (b) Implement any one of the case study with the specifications given below:
 - i. Create classes, objects and their properties.
 - ii. Add methods to classes and implement them.
 - iii. Refine the objects by adding constructors and local variables.
 - iv. Show communication between the objects by calling instance of one object from another class.

Banking Application:

The banking application consists of five divisions. They are customer details, creating a new account, withdrawing money, loan details and depositing money. The customer details consist of customer name, address, phone number, account number. To withdraw money checks the balance in the account and then get the money. The loan details consist of loan types like home loans, car loans, education loans etc. To deposit money enter the account number and give the amount to be deposited. [7M]

UNIT – III

5. (a) Summarize the concepts of exception handling with an example program. [7M]
(b) Write a Java program for producer consumer problem to illustrate the concept of multithreading? [7M]
6. (a) Analyze the meaning of the term `ArrayIndexOutOfBoundsException`. Develop a Java program that includes a try block and a catch clause that processes the `ArrayIndexOutOfBoundsException` Exception. [7M]
(b) Define an exception called “`NotEqualException`” that is thrown when a float value is not equal to 3.14. write a program that uses the above user. [7M]

UNIT – IV

7. (a) Distinguish between `InputStream` and `Reader` classes and `OutputStream` and `Writer` Classes with an example. [7M]
(b) Write a java program to illustrate file operations like read, write and counting no of characters in a file. [7M]
8. (a) Explain about query result processing in Java Database Connectivity(JDBC). [7M]
(b) Write a java program to Connect Java application with mysql database. [7M]

UNIT – V

9. (a) Explain briefly about adapter classes with an example program. [7M]
(b) Write a java program on Mouse and key listener events. [7M]
10. (a) Explain in detail about hierarchy for Abstract Window Toolkit(AWT) . [7M]
(b) Write a java program to design login window using AWT controls(Button,Label,Textfield). [7M]

