INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)
Dundigal-500043, Hyderabad

B.Tech III SEMESTER END EXAMINATIONS (REGULAR) - FEBRUARY 2022
Regulation:UG-20
PROGRAMMING WITH OBJECTS

Time: 3 Hours   **(CSE|IT|CSIT|DS)**   **Max Marks: 70**

Answer ALL questions in Module I and II
Answer ONE out of two questions in Modules III, IV and V
NOTE: Provision is given to answer TWO questions from among one of the Modules III / IV / V
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

MODULE – I

1. (a) What is inheritance? Give a detailed sketch of the differences between single, multilevel and hierarchial inheritance. **[7M]**

   (b) Develop a java program to read a number and check whether the number is positive or equal to zero or negative number. Use if-else-if structure and print the suitable output. **[7M]**

MODULE – II

2. (a) Differentiate between classes and interfaces in java. Describe the importance of interfaces by using an example. **[7M]**

   (b) Write a java program using class and object model to compute the bill in hotel with suitable constructor to read data and menu to choose item and a variable to read number of items selected. Item cost is to be initialized in the program. **[7M]**

MODULE – III

3. (a) Explain about different types of exception handling. Give the difference between checked and unchecked exceptions. **[7M]**

   (b) Generate two threads using runnable interface. First thread has to print prime numbers from 1 to N and second thread has to print first N Fibonacci numbers. The sleeping time for each thread is 5 milliseconds only. **[7M]**

4. (a) What is multithreading? Explain the ways to create multiple threads in java. **[7M]**

   (b) Write a java program to convert Roman numerals to decimal lying between 1 to N. It must throw an exception if it invalid roman number. **[7M]**

MODULE – IV

5. (a) Describe about JDBC connectivity steps. Write the difference between rowset vs. resultset in JDBC. **[7M]**

   (b) A bank is having multiple account holders with various ATMs. At any time a customer may withdraw or deposit money. It must show latest balance amount after every transaction. Write a JDBC program to update the amount balance in an account after every withdrawal and deposit. Assume the customer table exist in the database. **[7M]**

6. (a) Describe about byte stream and character stream. Which method of random access file class read a line from the file and returns it as a string? **[7M]**

(b) Mr Sambaraj is having module-1 and module-2 lecture notes of java subjects in two text files. Now he wants to combine the module 1 and module 2 into single file. Finally he wants to print contents of merged files. **[7M]**

MODULE – V

7. (a) Explain in detail about AWT class hierarchy. Distinguish AWT and swing in java. **[7M]**

(b) Write an example java program that displays four push buttons and a text field. Each button displays an icon that represents the flag of a country. When a button is pressed, the name of that country is displayed in the text field. **[7M]**

8. (a) What is the life cycle of an applet? Explain in detail with neat diagram. Differentiate java applications and applets. **[7M]**

(b) Write an applet to draw a smiley picture accept user name as a parameter and display welcome message. **[7M]**

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