Hall Ticket No | | | | | | | | | | | Course Code: AITC02

INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal, Hyderabad - 500 043

B.Tech III SEMESTER END EXAMINATIONS (REGULAR / SUPPLEMENTARY) - FEBRUARY 2023
Regulation: UG20

PROGRAMMING WITH OBJECTS

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

Answer ALL questions in Module I and II
Answer ONE out of two questions in Modules III, IV and V
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

MODULE – I

1. (a) Illustrate object oriented principles and constructor overloading concept with an example for each. [BL: Understand| CO: 1|Marks: 7]

   (b) Make use of constructor in java to calculate payroll calculation for the company ABC. [BL: Apply| CO: 1|Marks: 7]

MODULE – II

2. (a) Outline the purpose of interfaces in java with an example. Explain how to implement the interface in java. [BL: Understand| CO: 2|Marks: 7]

   (b) Develop a reservation class which has reserve method .Implement the subclasses reserve train and reserve bus that overrides the reserve method of reservation class. Implement a java code that access the super class constructors and methods. [BL: Apply| CO: 2|Marks: 7]

MODULE – III

3. (a) Analyze the need of thread synchronization. How is it achieved in java programming? Explain with a suitable program. [BL: Understand| CO: 4|Marks: 7]

   (b) Develop a program that includes a try block and a catch clause which processes the arithmetic exception generated by division-by-zero error. [BL: Apply| CO: 3|Marks: 7]

4. (a) Enlist the benefits of exception handling. How is it different from an error? Illustrate briefly the usage of five keywords in exception handling. [BL: Understand| CO: 4|Marks: 7]

   (b) Create a class student with attributes roll no, name, age and course. Initialize values through parameterized constructor. If age of student is not in between 15 and 21 then generate user-defined exception "Age Not With in Range Exception". If name contains numbers or special symbols raise exception "Name Not Valid Exception". Develop a java code that generates the two exceptions [BL: Apply| CO: 4|Marks: 7]

MODULE – IV

5. (a) Discuss about file streams in java along with its syntax. Explain about random access file operations with an example [BL: Understand| CO: 5|Marks: 7]

   (b) Write a program to read content of a file, split the sentences into words and count number of occurrences of 'is' in the given text. [BL: Apply| CO: 5|Marks: 7]

6. (a) Illustrate steps for DB connectivity in java. List the steps to connect the database in java. Which JDBC driver is the fastest driver? [BL: Understand| CO: 5|Marks: 7]

   (b) Write a program to read a file content and extract words using String Tokenizer class. Display the file if it contains the user query term/search key. [BL: Apply| CO: 5|Marks: 7]

MODULE – V

7. (a) Enumerate the life cycle of an applet. Discuss about different applet display methods in brief. [BL: Understand| CO: 6|Marks: 7]

   (b) Design a program using an applet which will print "key pressed" on the status window when you press the key, "key released" on status window when you release the key and when you type the character it should print "hello" at co-ordinates (50,50) on applet. [BL: Apply| CO: 6|Marks: 7]

8. (a) How to move/drag a component placed in swing container? Explain the component hierarchy of swings. [BL: Understand| CO: 6|Marks: 7]

   (b) Design a user interface to collect data from the student for admission application using swing components. [BL: Apply| CO: 6|Marks: 7]