CLASS: MCA   SEMESTER : III
BRANCH: MCA   SESSION : MO/19

SUBJECT: CA501 JAVA PROGRAMMING

TIME: 3 HOURS   FULL MARKS: 50

INSTRUCTIONS:
1. **The question paper contains 5 questions each of 10 marks and total 50 marks.**
2. **Attempt all questions.**
3. **The missing data, if any, may be assumed suitably.**
4. **Before attempting the question paper, be sure that you have got the correct question paper.**
5. **Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.**

Q.1(a) What are the primitive data types available in JAVA? In this context what are wrapper classes and auto   [5]
        boxing?
Q.1(b) In JAVA how would you compare the == operator to the Object class method *"equals"*. Demonstrate   [5]
        with a suitable example.

Q.2(a) Write a program in JAVA to convert a positive decimal integer to its binary equivalent. You are not   [5]
        allowed to use the division operation.
Q.2(b) The price of products sold on three different days in a shop are as given below: [5]
        Day1: 45, 78, 29
        Day2: 10, 22, 44, 89, 90, 67, 34
        Day3: 45, 90, 18, 67
        Write a program to store the data in a two-dimensional array of integers. Use your program to find the
        day with the largest price fluctuation (i.e. difference between cheapest item and costliest item). Your
        array should not create more space than absolutely required.

Q.3(a) Differentiate between checked and unchecked exceptions. In this context explain the terms "throw",   [5]
        "throws" and "finally".
Q.3(b) Name two different methods that you shall find in the StringBuffer class but not in the String class. Is   [5]
        the StringBuffer class derived from the String class? In this context, what is wrong in creating a class
        with the following signature
        class MyString extends String{}.

Q.4(a) With reference to a RandomAccessFile explain some of the most important methods offered by this class   [5]
        and their usage.
Q.4(b) Write a program that reads a file containing a series of integers in each line. Each line may contain a   [5]
        different number of integers. Each integer in a line is separated by a comma. Your program should sum
        the numbers in every line and output the line number containing the largest sum.

Q.5(a) Compare three different techniques to create event handlers for listening to events in JAVA GUIs.   [5]
Q.5(b) How would you create a GUI window in JAVA that would prompt the user when it is being closed? If the   [5]
        user cancels the close action the window stays open else it closes.

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