

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)**

**CLASS: MCA  
BRANCH: CSE**

**SEMESTER : III  
SESSION : MO/18**

**SUBJECT: MCA3001 JAVA PROGRAMMING**

**TIME: 3.00 HOURS**

**FULL MARKS: 60**

**INSTRUCTIONS:**

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
  2. Candidates may attempt any 5 questions maximum of 60 marks.
  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.
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- Q.1(a) Explain the salient features of java in detail? [6]  
Q.1(b) Briefly explain general structure of java program? [6]
- Q.2(a) What is data type? Discuss the different data types available in Java? [6]  
Q.2(b) What are the limitation of switch () case statement? Write a java program to detect whether the entered number is even or odd. Use nested switch () case statements? [6]
- Q.3(a) What is the difference between (!0) and (!1). How while loop works with these values? Write a java program to display the numbers in increasing and decreasing order using infinite for loop? [6]  
Q.3(b) Explain with a proper example how we use break “to exit a loop” and “as a form of goto”? [6]
- Q.4(a) Compare and contrast overloading and overriding methods? [6]  
Q.4(b) How to define array in java? Use class and object, write a java program to find the minimum and maximum values in an array? [6]
- Q.5(a) How does String class differ from the String Buffer class? Write a java program which will read a text and count all occurrences of a particular word? [6]  
Q.5(b) What is the difference between checked and unchecked exception? Explain with an example how exceptions enable your program to handle errors gracefully? [6]
- Q.6(a) What is a stream class? How are the stream classes classified? [6]  
Q.6(b) What is random access file? Explain how it is different from a sequential file? [6]
- Q.7(a) How do you make a GUI? What are the components of GUI? [6]  
Q.7(b) What is the JFrame? Explain GUI application in Java? [6]

**:::::26/11/2018:::::M**