

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

**CLASS: BE  
BRANCH: CSE**

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

**SUBJECT: CS3005 OBJECT ORIENTED PROG. USING JAVA**

**TIME:**

**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) What is the relevance of passing a String array to the main method in java? [2]  
Q.1(b) Explain the major features of java. [4]  
Q.1(c) Differentiate between Object Oriented Programming and Procedure Oriented Programming methodologies. [6]
- Q.2(a) Differentiate between String and String Buffer class in java. [2]  
Q.2(b) What are the different types of variables in Java? Give examples. [4]  
Q.2(c) Given three arrays sorted in non-decreasing order, write a program to print all common elements in these arrays. [6]  
Examples:  
input1 = {1, 5, 10, 20, 40, 80}  
input2 = {6, 7, 20, 80, 100}  
input3 = {3, 4, 15, 20, 30, 70, 80, 120}  
Output: 20, 80
- Q.3(a) What is a default constructor? [2]  
Q.3(b) Differentiate between throw and throws keyword in Java. Give examples. [4]  
Q.3(c) Both abstract class and interface can act as a base class container. How will you decide to select any of these in a particular situation? Give examples for both situations (1. preferring abstract class over interface 2.p preferring interface over abstract class) [6]
- Q.4(a) What are the different ways of creating a thread in Java? [2]  
Q.4(b) Differentiate between wait() and sleep() method in Java. [4]  
Q.4(c) Write a program to explain thread synchronization using methods. Also give sample output. [6]
- Q.5(a) Differentiate between character streams and byte streams. Mention major classes in each category. [2]  
Q.5(b) Write a program to Merge the contents of two files into a third file. [4]  
Q.5(c) What is the advantage of object serialization in Java? Write a program to explain the concepts of serialization and deserialization. [6]
- Q.6(a) Outline different ways in which an Applet is executed. [2]  
Q.6(b) Briefly explain the life cycle of an Applet using diagram. [4]  
Q.6(c) List out the differences between an Applet and Application in java. [6]
- Q.7(a) Briefly Explain the class hierarchy of AWT. [2]  
Q.7(b) Write short note on the following, giving examples for each [4]  
i) Component ii) Container iii) Layout Manager  
Q.7(c) Write a program to create a frame. Add five buttons named ONE, TWO, FIVE to your frame using grid layout. Draw a sample output for your program. [6]

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