**DEPARTMENT OF COMPUTER SCIENCE ENGINEERING**



**LABORATORY LESSON PLAN**

 **SUBJECT: OBJECT ORIENTED PROGRAMMING USING JAVA**

 **BRANCH: 3RD SEM, CSE**

 **FACULTY NAME: DR. ANITARANI BRAHMA**

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| **Discipline: Computer Science Engineering** | **Name of the Faculty: Dr. Anitarani Brahma** |  |
| **Sem: 3rd** | **No. of periods per week: 04 (Per Lab 2 hr)** **No. of week: 15** **No. of periods: 60** |  |
| **Subject: Object Oriented Methodology Using Java** |  |
| **WEEK** | **Lab Class(each 2 hr)** | **Program** |  |
| 1 | 1,2 | **Experiment 1: Understanding the concept of functionality of JVM.*** Install JVM in the Computer System
* Configuring environment variable
 |  |
| 2 | 3 | **Experiment 2: Basic Program:**Write a Java program to print 'Hello' on screen and then print your name on a separate line |  |
|  | 3 | Write a Java program to print the sum of two numbers. |  |
|  | 4 | Write a Java program to print the area and perimeter of a rectangle |  |
|  | 4 | Write a Java program to swap two variables. |  |
| 3 | 5 | **Viva Voice** |  |
|  | 5 | **Experiment 3: Programs using Conditional Statement:**Write a Java program to compare two numbers. |  |
|  | 5 | Write a Java program to accept a number and check the number is even or not. Prints 1 if the number is even or 0 if the number is odd. |  |
|  | 6 | Write a Java program that accepts two integer values from the user and return the larger values. However if the two values are the same, return 0 and return the smaller value if the two values have the same remainder when divided by 6. |  |
| 5 | 7 | **Viva Voice** |  |
|  | 8 | **Experiment 4: Programs Using Looping Concept:**Write a Java program and compute the sum of the digits of an integer. |  |
| 6 | 9 | Write a Java program to convert a decimal number to binary number. |  |
|  | 10 | **Viva Voice** |  |
| 7 | 11 | **Experiment 5: Programs Using Array Concept:**Write a Java program to traverse the elements of the array. |  |
|  | 12 | Write a Java program to get the larger value between first and last element of an array (length 3) of integers. |  |
| 8 | 13 | Given are two one-dimensional arrays, A and B which are sorted in ascending order. Write a program to merge them into a single sorted array C that contains every item from arrays A and B, in ascending order. |  |
|  | 14 | **Viva Voice** |  |
| 9 | 15 | **Experiment 6: Programs Using String Concept:**Write a Java program to input and print a string. |  |
|  | 16 | Write a Java program to count the letters, spaces, numbers and other characters of an input string. |  |
| 10 | 17 | Write a Java program to reverse a string. |  |
|  | 18 | **Viva Voice** |  |
| 11 | 19 | **Experiment 7: Programs Using Class:**Design a class to represent a Student record.Include the following members:Data members:Name of the student, Registration Number, Branch, semMethods:. To assign initial values. To display the details Create records of 3 students. (three objects) |  |
|  | 20 | Design a class to represent a bank account. Include the following members: Data members: • Name of the depositor • Account Number • Type of account • Balance amount in the account 21 Methods: • To assign initial values • To deposit an amount• To withdraw an amount • To display the name and balance |  |
| 12 | 21 | **Viva Voice** |  |
|  | 22 | **Experiment 8: Programs Using Constructor:**Write a java program implementing Constructor |  |
|  | 22 | Write a java program implementing Parametrized Constructor |  |
|  | 22 | **Viva Voice** |  |
| 13 | 23 | **Experiment 9: Programs Using Overloading:**Write a java program implementing function overloading. |  |
|  | 23 | Write a java program implementing constructor overloading. |  |
|  | 23 | **Viva Voice** |  |
|  | 24 | **Experiment 10: Programs Using Inheritance:**Write a java program implementing single inheritance. |  |
|  | 24 | Write a java program implementing multiple inheritance. |  |
|  | 24 | **Viva Voice** |  |
| 14 | 25 | **Experiment 11: Programs Using Package:**Write a java program implementing package. |  |
|  | 25 | **Viva Voice** |  |
|  | 26 | **Experiment 12: Programs Using Stream:**Write a java program to read a file line by line and print the line on the output screen. |  |
|  | 26 | Write a java program to read content from one file and write it into another file |  |
|  | 26 | **Viva Voice** |  |
| 15 | 27 | **Experiment 13: Programs Using Exception handling:**Define an exception called “No Match Exception” that is thrown when a string is not equal to “India”. Write a program that uses this exception. |  |
|  | 27 | **Viva Voice** |  |
|  | 28, 29, 30 | **Experiment 14: Develop a Small Project Using Java**Develop a java project for percentage calculator/temperature conversion tool. |  |

 Books Recommended:-

 01 E. Balagurusami Programming With Java: A Primer The McGraw-Hill Companies

 02 Patric Naughton Herbert Schildt JavaTM 2: The Complete Reference Tata McGraw-Hill Publishing Company Limited

 03 Rashmi Kanta Das Core Java For Beginners Vikas Publishing

 04 Herbert Schildt Java: A Beginner‟s Guide McGraw-Hill Education

 05 Cay S. Horstmann Core Java Volume I - Fundamentals Prentice Hall

 Faculty Senior Lecturer