|  |  |
| --- | --- |
| **CO1** | Practical - implement object-oriented concepts of Java programming. |
| **CO2** | Work with Generics, networking and GUI based application development. |
| **CO3** | Develop dynamic web applications with database connectivity using server-side technologies. |
| **CO4** | Create distributed applications using RMI, Java Bean and web services. |
| **CO5** | Design and development of applications using advanced frameworks. |
| **CO6** | Understand the importance of advanced frameworks |

**BL – Bloom’s Taxonomy Levels**

(L1- Remembering, L2-Understanding, L3-Applying, L4- Analysing, L5-Evaluating, L6-Creating)

|  |  |  |  |
| --- | --- | --- | --- |
| **Question No** | **Question** | **CO** | **Bloom’s Taxonomy** |
| 1 | Write a program to input an integer and assign the result to int variable value. Assume Scanner variable input can be used to read a value from the keyboard. | CO1 | L3 |
| 2 | Write a program to print "This is a Java program" on one line in the command window. Use method System.out.println. | CO1 | L3 |
| 3 | Write a program to print "This is a Java program" on two lines in the command window. The first line should end with Java. Use method System.out.printf and two %s format specifiers. | CO1 | L3 |
| 4 | Using the statements given below, write a complete program that calculates and prints the product of three integers.   * State that a program will calculate the product of three integers. * Create a Scanner called input that reads values from the standard input. * Declare the variables x, y, z and result to be of type int. * Prompt the user to enter the first integer. * Read the first integer from the user and store it in the variable x. * Prompt the user to enter the second integer. * Read the second integer from the user and store it in the variable y. * Prompt the user to enter the third integer. * Read the third integer from the user and store it in the variable z. * Compute the product of the three integers contained in variables x, y and z, and assign the result to the variable result. * Use System.out.printf to display the message "Product is" followed by the value of the variable result | CO1 | L3 |
| 5 | Write a program to assign the product of variables b and c to variable a. | CO1 | L3 |
| 6 | Write a program that displays the numbers 1 to 4 on the same line, with each pair of adjacent numbers separated by one space. Use the following techniques:  a) Use one System.out.println statement.  b) Use four System.out.print statements.  c) Use one System.out.printf statement. | CO1 | L3 |
| 7 | Write a program that asks the user to enter two integers, obtains them from the user and prints their sum, product, difference and quotient (division). | CO1 | L3 |
| 8 | Write a program that asks the user to enter two integers, obtains them from the user and displays the larger number followed by the words "is larger". If the numbers are equal, print the message "These numbers are equal | CO1 | L3 |
| 9 | Write a program that inputs three integers from the user and displays the sum, average, product, smallest and largest of the numbers. | CO1 | L3 |
| 10 | Write a program that displays a box, an oval, an arrow and a diamond using asterisks (\*), as follows: | CO1 | L3 |
| 11 | Write a program that reads five integers and determines and prints the largest and smallest integers in the group. Use only the programming techniques you learned in this chapter. | CO1 | L3 |
| 12 | Write a program that reads an integer and determines and prints whether it’s odd or even | CO1 | L3 |
| 13 | Write a program that reads two integers, determines whether the first is a multiple of the second and prints the result. | CO1 | L3 |
| 14 | Write a program that displays a checkerboard pattern, as follows: | CO1 | L3 |
| 15 | Write a program that inputs from the user the radius of a circle as an integer and prints the circle’s diameter, circumference and area using the floating-point value 3.14159 for π. Use the following formulas (r is the radius):   * diameter = 2r * circumference = 2πr * area = πr2   Do not store the results of each calculation in a variable. Rather, specify each calculation as the value that will be output in a System.out.printf statement. | CO1 | L3 |