ICP PRACTICAL IMPORTANT QUESTIONS:-

1. Write a program to accept a number and check and display whether it is a spy number or not. (A number is spy if the sum of its digits equals the product of its digits.) Example: consider the number 1124, Sum of the digits = 1 + 1 + 2 + 4 = 8 Product of the digits = 1×1x2x4 = 8

2. Assume that x is a positive variable of type double. Write a code fragment that the value of sum to e x = $1 + x + x^2/2 + x^3/3 + \ldots x^n/n$

    Eg-e^3=20.07

3. Write a program that encodes a word into Piglatin. To translate word into a Piglatin word, convert the word into uppercase and then place the first vowel of the original word as the start of the new word along with the remaining alphabets. The alphabets present before the vowel being shifted towards the end followed by "AY". Sample input (1): London, Sample output (1): ONDONLAY Sample input (2): Olympics, Sample output (2): OLYMPICSAY.

4. A tech number has even number of digits. If the number is split in two equal halves, then the square of sum of these halves is equal to the number itself. Write a program to check whether it is a Tech number or not. Example: Consider the number 3025 Square of sum of the halves of 3025 = (30+25)2 = (55)2 = 3025 is a tech number.

5. Write a program to input a number and print whether the number is a special number or not. (A number is. said to be a special number, if the sum of the factorial of the digits of the number is same as the original number). Example: 145 is a special number, because 1!+4!+5! = 1 + 24 + 120 = 145 (Where! stands for factorial of the number and the factorial value of a number is the product of all integers from 1 to that number, example 5! = 1*2*3*4*5 = 120).

6. Write a program in java accepts two number and print the lcm of the two numbers.

7. Write the java statements to input amount from user and print minimum number of notes (Rs. 2000, 500, 100, 50, 20, 10, 5, 2, 1) required for the amount

8. Write a program in java to accept an Array A and swap two consecutive elements in array.

   Input: A[]={1,2,3.4,5,6}

   Output: A[]={2,1,4,3,6,5}

9. **Write a program in java ISBN** is another special number in Java. **ISBN** stands for the **International Standard Book Number** that is carried by almost each every book. The ISBN is a ten-digit unique number. With the help of the ISBN, we can easily find any book. The ISBN number is a legal number when 1*Digit1 + 2*Digit2 + 3*Digit3 + 4*Digit4 + 5*Digit5 + 6*Digit6 + 7*Digit7 + 8*Digit8 + 9*Digit9 + 10*Digit10 is divisible by 11. The digits are taken from right to left. So, if the ten-digit number is 7426985414, Digit1 and Digit10 will be 4 and 7, respectively

   Number1: 8147852369

Sum = (1*9) + (2*6) + (3*3) + (4*2) + (5*5) + (6*8) + (7*7) + (8*4) + (9*1) + (10*8)

Sum = 9 + 12 + 9 + 8 + 25 + 48 + 49 + 32 + 9 + 80

Sum = 281

Now, we divide the sum with 11 and check whether the remainder is 0 or not. If the remainder is 0, the number is a legal ISBN.

rem = 281 % 11

rem = 6 != 0

Number **8147852369** is not a legal ISBN because the remainder is not equal to the 0.

Number2: 1259060977

Sum = (1*10) + (2*9) + (5*8) + (9*7) + (0*6) + (6*5) + (0*4) + (9*3) + (7*2) + (7*1)

Sum = 10 + 18 + 40 + 63 + 0 + 30 + 0 + 27 + 14 + 7

Sum = 209

Now, we divide the sum with 11 and check whether the remainder is 0 or not.

rem = 209 % 11

rem = 0

10. Given a=0, b=1 and c=1 are the first three numbers of some sequence. All other numbers in the sequence are generated from the sum of their three most recent predecessors. Write a java program to generate this sequence up to n terms where n > 3