1A

Read pg 96 - 109

|  |
| --- |
| 1. ***WAP to calculate simple interest for 3 sets of p, n and r.*** 2. ***Print numbers from 1 to 10.*** 3. ***Print numbers from 10 to 1.*** 4. ***Print numbers from 1 to 10 using ++ operator.*** 5. ***Print numbers from 10 to 1 using – operator.*** 6. ***Print numbers from 10 to 1 using -= operator.*** 7. ***Print numbers from 1 to 10 using += operator.*** 8. ***Print numbers from 1 to 10 using a post-incrementation operator.*** 9. ***Print numbers from 10 to 1 using a post-decrementation operator.*** 10. ***Print numbers from 1 to 10 using a pre-incrementation operator.*** 11. ***Print numbers from 10 to 1 using a post incrementation operator.*** |

2A

|  |
| --- |
| 1. ***WAP to accept a number and print it in reverse order.*** 2. ***WAP to accept a number and display the sum of its digits.*** 3. ***WAP to accept a number and display the highest digit in that number.*** 4. ***WAP to accept a number and display if it is an Armstrong number (An***Armstrong number***is a***number***such that the sum ! of its digits raised to the third power is equal to the***number***! itself. For example, 371 is an***Armstrong number***).*** 5. ***WAP to list all the Armstrong numbers from 0 to 1000.*** 6. ***WAP to accept 10 numbers from the user and display the sum of the entered numbers.*** 7. ***WAP to accept a number and display the multiplication table for that number upto 12.*** 8. ***WAP to display all even numbers from 1 to n*** |

2B

|  |
| --- |
| 1. ***WAP to find sum of all even numbers between 1 to n*** 2. ***WAP to find and print the first and last digit of a number.*** 3. ***WAP to find the sum of first and last digit of a number.*** 4. ***WAP to swap first and last digits of a number.*** 5. ***WAP to accept a number and find the sum of its digits.*** 6. ***WAP to accept a number and find the product of the digits of the entered number*** 7. ***WAP to accept a number and print it in reverse order.*** 8. ***WAP to accept a number and display the reverse of the number along with the original number.*** 9. ***WAP to accept a number and check whether that number is a palindrome or not.*** 10. ***WAP to accept a number and print it in words. Input = 103, output = one zero three.*** 11. ***WAP to print all the ASCII characters with their values.*** 12. ***WAP to print all alphabets from a to z*** |

1B

|  |
| --- |
| 1. ***WAP to print all even numbers in the range 100 to 200.*** 2. ***WAP to print all numbers that are divisible by 3 and 5 in the range 1 to 1000.*** 3. ***WAP to display odd numbers from 100 to 1*** 4. ***WAP to accept a number and display all the numbers from that number to 1*** 5. ***WAP to accept a number and display all the numbers from 1 to that number.*** 6. ***WAP to accept a number and display the sum of numbers from 1 to the given number.*** 7. ***WAP to accept a number and display its factors. \*\*DONT DO THIS\*\**** 8. ***WAP to accept a number and display the count of the number of its digits.*** |

3A

|  |
| --- |
| 1. ***WAP to find power of a number.*** 2. ***WAP to find all factors of a given number.*** 3. ***WAP to find the factors of a given number except 1 and num itself*** 4. ***WAP to calculate factorial of a number.*** 5. ***WAP to find HCF(GCD) of two given numbers.*** 6. ***WAP to find LCM of two given numbers.*** 7. ***WAP to check whether a given number is Prime or not.*** 8. ***Print all Prime numbers between 1 to n.*** 9. ***Print all Prime numbers between start to end.*** 10. ***WAP to print all Armstrong numbers between 1 to n.*** 11. ***WAP to print all Armstrong numbers between start to end.*** 12. ***WAP to find if a number is a perfect number.*** 13. ***WAP to find all perfect numbers from 1 to n.*** 14. ***WAP to find all perfect numbers from start to end.*** 15. ***WAP to find if a number is a STRONG number.*** Strong number is a special number whose sum of factorial of digits is equal to the original number. For example: 145 is strong number. Since, 1! + 4! + 5! = 145 16. ***WAP to find all STRONG numbers from 1 to n.*** 17. ***WAP to find all STRONG numbers from start to end.*** |

4A

Textbook

|  |
| --- |
| 1. ***WAP to calculate overtime pay of 10 employees. Overtime is paid at the rate of $ 12.00 per hour for every hour worked above 40 hours. Assume that employees do not work for fractional part of an hour.*** 2. ***Two numbers are entered through the keyboard, WAP to find the value of one number raised to the power of another.*** 3. ***WAP to print all the ASCII values and their equivalent characters using a for loop. The ASCII values vary from 0 to 255.*** |

4B

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. ***WAP for a matchstick game being played between the computer and a user. Your program should ensure that the computer always wins. Rules for the game are as follows:***  * ***There are 21 matchsticks.*** * ***The computer asks the player to pick 1, 2, 3 or 4 matchsticks.*** * ***After the person picks, the computer does its picking.*** * ***Whoever is forced to pick up the last matchstick loses the game.***  |  |  | | --- | --- | | ***Characters*** | ***ASCII Values*** | | ***A - Z*** | ***65 - 90*** | | ***a - z*** | ***97 - 122*** | | ***0 - 9*** | ***48 - 57*** | | ***Special symbols*** | ***0 – 47, 58 – 64, 91 – 96, 123 - 127*** | |

3B

|  |
| --- |
| 1. ***WAP to print Fibonacci series up to n terms. For Ex:***   ***0, 1,1,2,3,5,8,13,21,…(n-1th + n-2th)***   1. ***WAP to find one’s complement of a binary number. It should be 8 bit only otherwise display upto 8***   ***Input binary number: 01000011***  ***Ones complement: 10111100***  ***2i. WAP to find one’s complement of a binary number.***   1. ***WAP to find two’s complement of a binary number.*** 2. ***WAP to convert Decimal to Binary number system.*** 3. ***WAP to convert Binary to Decimal number system.*** 4. ***WAP to convert Binary to Octal number system.*** 5. ***WAP to convert Octal to Binary number system.*** 6. ***WAP to convert Binary to Hexadecimal number system.*** 7. ***WAP to convert Octal to Hexadecimal number system.*** 8. ***WAP to convert Decimal to Hexadecimal number system.*** 9. ***WAP to convert Hexadecimal to Octal number system.*** 10. ***WAP to convert Hexadecimal to Decimal number system.*** 11. ***WAP to convert Hexadecimal to Binary number.*** 12. ***WAP to convert Decimal to Octal number system.*** 13. ***WAP to convert Octal to Decimal.*** |

5A

|  |
| --- |
| 1. ***WAP to enter numbers till the user wants. At the end it should display the count of positive, negative and zeroes entered.*** 2. ***WAP to receive an integer and find its octal equivalent. (To obtain octal equivalent of an integer, divide it continuously by 8 till dividend doesn’t become zero, then write the remainder obtained in reverse direction.)*** 3. ***WAP to find the range of a set of numbers entered through the keyboard. Range is the difference between the smallest and biggest number in the list.*** |

6A

|  |
| --- |
| 1. ***Decimal to Binary Conversion Exercises:*** 2. ***163*** 3. ***45*** 4. ***3370*** 5. ***239*** 6. ***66*** 7. ***Convert the Following Binary to decimal*** 8. 11100002 9. 1100100010010012 10. 10001010112 11. 11001002 12. 110010110001112 |

6B

|  |
| --- |
| 1. ***Convert Binary to Octal:*** 2. ***1100111*** 3. ***10100011*** 4. ***101101*** 5. ***110100101010*** 6. ***11101111*** 7. ***01000010*** 8. ***Convert Octal to Binary:*** 9. ***377*** 10. ***546*** 11. ***400*** 12. ***34*** 13. ***762*** 14. ***234*** |

5B

|  |
| --- |
|  |

7A

|  |
| --- |
| 1. ***Binary to Hexadecimal:*** 2. ***10010001*** 3. ***101010*** 4. ***100110101*** 5. ***1010101001*** 6. ***1100111*** 7. ***Octal to hexadecimal:*** 8. ***377*** 9. ***632*** 10. ***342*** 11. ***56*** 12. ***44*** |

8A

|  |
| --- |
| 1. ***Hexadecimal to Octal:*** 2. ***536*** 3. ***567*** 4. ***4321*** 5. ***1245*** 6. ***67*** 7. ***55*** 8. ***Hexadecimal to Decimal:*** 9. ***22C*** 10. ***1AF*** 11. ***43*** 12. ***58*** 13. ***3E7*** 14. ***21E*** |

8B

|  |
| --- |
| 1. ***Hexadecimal to Binary*** 2. ***21E*** 3. ***22*** 4. ***28E*** 5. ***378*** 6. ***1CB*** 7. ***3A3*** 8. ***13*** |

7B

|  |
| --- |
| 1. ***Decimal to Hexadecimal*** 2. ***128*** 3. ***567*** 4. ***400*** 5. ***841*** 6. ***59*** 7. ***56*** 8. ***273*** 9. ***105*** 10. ***158*** 11. ***171*** 12. ***78*** |

9A

|  |
| --- |
| 1. ***Decimal to Octal*** 2. ***675*** 3. ***490*** 4. ***72*** 5. ***444*** 6. ***789*** 7. ***99*** 8. ***999*** |

10A

|  |
| --- |
| 1. ***Print pascal triangle for n rows.***   **Example**  **Input**  Input rows: 5  **Output**  1  1 1  1 2 1  1 3 3 1  1 4 6 4 1 |

10B

|  |
| --- |
| Logic to print pascal triangle To find nth term of a pascal triangle we use following formula. Pascal triangle formula  Where n is row number and k is term of that row.  Step by step descriptive logic to print pascal triangle.   1. Input number of rows to print from user. Store it in a variable say num. 2. To iterate through rows, run a loop from 0 to num, increment 1 in each iteration. The loop structure should look like for(n=0; n<num; n++). 3. Inside the outer loop run another loop to print terms of a row. Initialize the loop from 0 that goes to n, increment 1 in each iteration. 4. Inside the inner loop use formula term = fact(n) / (fact(k) \* fact(n-k)); to print current term of pascal triangle.   Here, fact() is a function defined to [find factorial of a number](https://codeforwin.org/2015/06/c-program-to-calculate-factorial-of-any-number.html). |

9B

|  |
| --- |
| 1. ***Octal to Decimal:*** 2. ***100*** 3. ***111*** 4. ***73*** 5. ***1346*** 6. ***12*** 7. ***102*** 8. ***54*** |

11A

|  |
| --- |
| Write a program in C to display the pattern like right angle triangle using an asterisk.  The pattern like :  \*  \*\*  \*\*\*  \*\*\*\*  Display the pattern like right angle using an asterisk |

12A

|  |
| --- |
| Write a program in C to make such a pattern like right angle triangle with a number which will repeat a number in a row.  The pattern like :  1  22  333  4444  Display the pattern like right angle triangle which repeat a number in a row |

12B

|  |
| --- |
| Write a program in C to make such a pattern like right angle triangle with number increased by 1.  The pattern like :  1  2 3  4 5 6  7 8 9 10  Display the pattern like right angle triangle with number increased by 1 |

11B

|  |
| --- |
| Write a program in C to display the pattern like right angle triangle with a number.  The pattern like :  1  12  123  1234  Display the pattern like right angle triangle using a number |

13A

|  |
| --- |
| Write a program in C to make such a pattern like a pyramid with numbers increased by 1.  1  2 3  4 5 6  7 8 9 10  Display the pattern like a pyramid with numbers increased by 1 |

14A

|  |
| --- |
| Write a program in C to print the Floyd's Triangle.  1  01  101  0101  10101  Print the Floyd's Triangle |

14B

|  |
| --- |
| 1. ***WAP to print an odd pyramid.*** 2. ***WAP to take numbers until user enters 0 and display the average of those numbers.*** 3. ***WAP to accept a number and display the smallest factor of that number other than 1.*** 4. ***WAP to accept numbers from the user until the user enters a number that is not in the order (i.e., ascending or descending). For example, if the number is in ascending order, we continue accepting. Otherwise, we break.*** 5. ***WAP to accepts a number and display the largest factor other than that number.*** 6. ***WAP to accept the number of rows and print “1, 2, 3, 4, 5” in each row.*** |

13B

|  |
| --- |
| Write a program in C to make such a pattern like a pyramid with an asterisk.  \*  \* \*  \* \* \*  \* \* \* \*  Display the pattern like a pyramid with an asterisk |

15A

|  |
| --- |
| 1. ***WAP to display the following depending on the number of rows the user enters:***   ***1 1 1 1 1***  ***2 2 2 2 2***  ***3 3 3 3 3***  ***4 4 4 4 4***  ***5 5 5 5 5*** |

16A

|  |
| --- |
| 1. ***WAP to display the following:***   ***0 0 0 0 1***  ***0 0 0 1 0***  ***0 0 1 0 0***  ***0 1 0 0 0***  ***1 0 0 0 0***  ***2. WAP to display the following:***  ***1 0 0 0 1***  ***0 1 0 1 0***  ***0 0 1 0 0***  ***0 1 0 1 0***  ***1 0 0 0 1***  ***3. WAP to print factorial from 1 to 10.*** |

16B

|  |
| --- |
| 1. ***WAP to display the following:***   ***1 2 3 4 5***  ***1 1 2 3 4***  ***1 1 1 2 3***  ***1 1 1 1 2***  ***1 1 1 1 1***  ***2. WAP to accept a number and display single-digit sum.***  ***3. WAP to accept 10 characters from user and display how many of them are uppercase letters.***  ***4. WAP to accept password which is of 6 letters and check whether it is a valid password. Valid password must contain at least one digit and one special character.***  ***5. WAP to accept 10 characters and display the inverted case, and don’t echo the original characters.*** |

15B

|  |
| --- |
| 1. ***WAP to display the following:***   ***1 0 0 0 0***  ***0 1 0 0 0***  ***0 0 1 0 0***  ***0 0 0 1 0***  ***0 0 0 0 1*** |

17A

|  |
| --- |
| 1. ***WAP to pick a number all the range from 1-9999 so that the sum of the digits is 7, and the order of the digits is in ascending. For example, if the user enters the following numbers: 7, 16, 61, 142, 34, 124, 43, 93, then the program should display: 7, 16, 34, 124*** |

18A

|  |
| --- |
|  |

18B

|  |
| --- |
|  |

17B

|  |
| --- |
|  |

19A

|  |
| --- |
|  |

20A

|  |
| --- |
|  |

20B

|  |
| --- |
|  |

19B

|  |
| --- |
|  |

21A

|  |
| --- |
|  |

22A

|  |
| --- |
|  |

22B

|  |
| --- |
|  |

21B

|  |
| --- |
|  |

23A

|  |
| --- |
|  |

24A

|  |
| --- |
|  |

24B

|  |
| --- |
|  |

23B

|  |
| --- |
|  |

25A

|  |
| --- |
|  |

26A

|  |
| --- |
|  |

26B

|  |
| --- |
|  |

25B

|  |
| --- |
|  |

27A

|  |
| --- |
|  |

28A

|  |
| --- |
|  |

28B

|  |
| --- |
|  |

27B

|  |
| --- |
|  |

29A

|  |
| --- |
|  |

30A

|  |
| --- |
|  |

30B

|  |
| --- |
|  |

29B

|  |
| --- |
|  |