Sardar Vallabhbhai Institute of Technology, Surat
Department of Artificial Intelligence
IoP and FCP Lab Assignments

Lab-1

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1. PROGRAM TO CALCULATE SIMPLE INTEREST.
2. PROGRAM TO READ MARKS OF FIVE SUBJECT OF A STUDENT AND CALCULATE TOTAL AND PERCENTAGE.
3. PROGRAM TO CALCULATE GROSS SALARY.
4. PROGRAM TO CONVERT TEMPERATURE FROM FAHRENHEIT TO CENTIGRADE DEGREES.
5. PROGRAM TO SWAP TOW VARIABLES USING THIRD VARIABLE.
6. PROGRAM TO SWAP TWO VARIABLES WITHOUT USING THIRD VARIABLE.
7. PROGRAM TO CALCULATE AREA OF A TRIANGLE.
8. EARTH TAKES A PERIOD OF REVOLUTION OF 31558150 SECONDS .WRITE A C PROGRAM TO CONVERT THIS INTO NUMBER OF DAY,HOURS AND MINUTES
9. PROGRAM TO READ TIME IN HR,MIN,SEC AND CONVERT IT INTO TOTAL SECOND.
10. WRITE A C PROGRAM TO CALCULATE THE CUT OFF MARK OF A STUDENT USING THE FORMULA.
    CM = M/2+P/2+C/2+E
    WHERE CM = Cut of f mark
    M = Marks in Mathematics out of 200
    P = Marks in Physics out of 200
    C = Marks in Chemistry out of 200
    E = Marks in entrance examination out of 100
11. PROGRAM TO READ TOTAL SECOND AND CONVERT IT INTO TIME.
12. PROGRAM TO PRINT ASCII CODE OF ANY CHARACTER.
13. PROGRAM TO CHECK WHETHER A NO. IS EVEN OR ODD.
14. PROGRAM TO CHECK WHETHER A GIVEN CHARACTER IS CAPITAL, LETTER, SMALL CASE LETTER, A DIGIT OR A SPECIAL SYMBOL.
15. PROGRAM TO READ MARKS OF FIVE SUBJECT AND PRINT DIVISION.

Lab-2

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16. PROGRAM TO READ THREE NOS. AND PRINT MAX.
17. PROGRAM TO READ THREE NOS. AND PRINT MAX USING LOGICAL OPERATOR.(&&)
18. PROGRAM TO READ THREE NOS. AND PRINT MAX USING CONDITIONAL (? :) OPERATOR.
19. PROGRAM TO READ A CHARACTER AND CHECK WHETHER IT IS A SMALL CASE LETTER OR NOT USING CONDATIONAL OPERATOR.
20. PROGRAM WHICH WILL WORK LIKE A SIMPLE CALCULATOR USING SWITCH-CASE.
21. PROGRAM TO READ TWO NOS. AND PERFORM SPECIFIC TASK (USING ARITHMETIC OPERATOR)AND THIS PERFORM USING SWITCH-CASE.(CASE IN CHAR FORM).
22. PROGRAM TO CALCULATE FACTORIAL OF A NO.
23. PROGRAM TO READ TWO NOS. AND CALCULATE **POWER** WITHOUT USING HEADER FILE(<MATH.H>).

Lab-3 and Lab-4

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24. WRITE A C PROGRAM TO FIND THE VALUE OF Y USING

$$Y(x,n) = \begin{cases} 1+x & \text{where n=1} \\ 1+x/n & \text{where n=2} \\ 1+x^n & \text{when n=3} \\ 1+nx & \text{when n>3 or n<1} \end{cases}$$

25. PROGRAM TO PRINT TABLE OF ANY NO.
26. PROGRAM TO PRINT SUM OF ALL ODD AND EVEN NO B/W 1 TO N.
27. PROGRAM TO CHECK WHETHER A NO IS **PRIME** OR NOT.
28. PROGRAM TO CHECK WHETHER A NO IS **ARMSTRONG** OR NOT.
29. PROGRAM TO CHECK WHETHER A NO IS **PALINDROM** OR NOT.
30. PROGRAM TO REVERSE OF A GIVEN NO.
31. PROGRAM TO PRINT SUM OF INDIVIDUAL DIGITS OF A 'N' DIGIT NO.
32. PROGRAM TO FINDOUT MAX AND SECOND MAX FROM 'N' NOS .
33. PROGRAM TO FINDOUT MAX AND MIN FROM 'N' NOS.
34. PROGRAM TO PRINT FIBONACCI SERIES.(0,1,1,2,3…)
35. READ A NUMBER N AND PRINT A **SINGLE** DIGIT ANSWER SHOWING SUM OF DIGIT OF N
36. PROGRAM TO PRINT 1,3,5,7,9………N.
37. PROGRAM TO PRINT 2,4,6,8,10,12………N.
38. PROGRAM TO PRINT 1,4,9,16,25,………N.
39. PROGRAM TO PRINT 1/1!+2/2!+3/3!+4/4!,………N.
40. READ NUMBERS TILL A NEGATIVE NUMBER IS ENTERED AND CALCULATE SUM OF A LIST OF NUMBERS READ.
41. READ A NUMBER N AND PRINT FACTOR OF N.(EX 28= 1,2,4,7,14,28)
42. READ A NUMBER N AND PRINT IF N IS PRIME OR COMPOSITE.
43. WRITE A C PROGRAM TO CALCULATE THE COMMISSION FOR A SALES REPRESENTATIVE AS PER THE SALES AMOUNT GIVEN BELOW.

   If   sales<=Rs. 500, commission is 5%
   If   sales> but <=2000, commission is Rs. 35 plus 10% above Rs. 500
   If   sales>2000 but <=5000, commission is Rs. 185 plus 12% above Rs. 2000
   If   sales>5000, commission is 12.5%

44. WRITE A PROGRAM IN C FOR THE FOLLOWING.
    AN ELECTRIC DISTRIBUTION COMPANY CHARGES ITS DOMESTIC CONSUMERS AS FOLLOWS.

Consumption in unit	Rate for Charge
0-200	Re 0.50 per unit

Praveen Kumar Chandaliya, DoAI

210-400	Rs. 100 plus Re 0.65 per unit excess of 200
401-600	Rs. 230 plus Re 0.80 per unit excess of 400
Above 600	Rs. 425 plus Rs. 125 per unit excess of 600

Print the amount to be paid by the consumer.