

**Q1. Identify Errors (if any):**

[08]

(i) int sum(int x, int y)  
{  
int result;  
result = x+y;  
}

(ii) scanf( "%d%d", &number1, number2 );

(iii) if ( c >= 7 ) { printf( "C is equal to or less than 7\n" );}

(iv) while ( c <= 5 ) { product \*= c; ++c;

(v) if ( gender == 1 ) printf( "Woman\n" );else; printf( "Man\n" );

(vi) x = 1;while ( x <= 10 ); x++;}

(vii) struct person {char lastName[ 15 ];char firstName[ 15 ];int age;}

(viii) #define SIZE 100;

**Q2. Use a single-subscripted array to solve the following problem. A company pays its salespeople on a commission basis. The salespeople receive \$200 per week plus 9% of their gross sales for that week. For example, a salesperson who grosses \$3000 in sales in a week receives \$200 plus 9% of \$3000, or a total of \$470. Write a C program (using an array of counters)that determines how many of the salespeople earned salaries in each of the following ranges (assume that each salesperson's salary is truncated to an integer amount):** [08]

- a) \$200–299
- b) \$300–399
- c) \$400–499
- d) \$500–599
- e) \$600–699
- f) \$700–799
- g) \$800–899
- h) \$900–999
- i) \$1000 and over

**Q3. A parking garage charges a \$2.00 minimum fee to park for up to three hours and an additional \$0.50 per hour for each hour or part there of over three hours. The maximum charge for any given 24-hour period is \$10.00. Assume that no car parks for longer than 24 hours at a time. Write a program that will calculate and print the parking charges for each of three customers who parked their cars in this garage yesterday. You should enter the hours parked for each customer. Your program** [08]

should print the results in a neat tabular format, and should calculate and print the total of yesterday's receipts. The program should use the function calculate Charges to determine the charge for each customer. Your outputs should appear in the following format:

Car	Hours	Charge
1	1.5	2.00
2	4.0	2.50
3	24.0	10.00
TOTAL	29.5	14.50

**Q4. Implement the following integer functions:**

[08]

a) Function Celsius returns the Celsius equivalent of a Fahrenheit temperature.

b) Function Fahrenheit returns the Fahrenheit equivalent of a Celsius temperature.

c) Use these functions to write a program that prints charts showing the Fahrenheit equivalents of all Celsius temperatures from 0 to 100 degrees, and the Celsius equivalents of all Fahrenheit temperatures from 32 to 212 degrees.

Print the outputs in a neat tabular format that minimizes the number of lines of output while remaining readable.

**Q5. Create a structure to specify data of a student at a University The data to be stored is: ID, Date of Joining, Name, Score, Grade.**

[08]

Assume there are three grades: A, B and C. Assume maximum of 100 students in the university

(1) Print the total number of students whose score is less than 90 and those with score greater than 90

(2) Print the details of students whose name is "Akram" and score is less than 60

(3) Write a function to print the names of students whose grade is A and ID is less than 10

(4) Write a function to print the names of students whose date of joining is 1/10/2020

Formatted: Font: Calibri, 11 pt

Formatted: Normal