Array - Single Dimension

Question 1 Write a C/C++ program to find the sum and average of one dimensional integer array.

Question 2 Write a C/C++ program to swap first and last element of an integer 1-d array.

Question 3 Write a C/C++ program to reverse the element of an integer 1-D array.

Question 4 Write a C/C++ program to find the largest and smallest element of an array.

Question 5 Write a menu driven C/C++ program with following option
a. Accept elements of an array
b. Display elements of an array
c. Sort the array using insertion sort method
d. Sort the array using selection sort method
e. Sort the array using bubble sort method
Write C/C++ functions for all options. The functions should have two parameters name of the array and number of elements in the array.

Question 6 P is one-dimensional array of integers. Write a C/C++ function to efficiently search for a data VAL from P. If VAL is present in the array then the function should return value 1 and 0 otherwise.

Question 7 Suppose a one-dimensional array AR containing integers is arranged in ascending order. Write a user-defined function in C/C++ to search for an integer from AR with the help of Binary search method, returning an integer 0 to show absence of the number and integer 1 to show presence of the number in the array. Function should have three parameters : (i) array AR (ii) the number to be searched and (iii) the number of elements N in the array.

Question 8 Suppose A, B, C are arrays of integers of size M, N, and M + N respectively. The numbers in array A appear in ascending order while the numbers in array B appear in descending order. Write a user defined function in C/C++ to produce third array C by merging arrays A and B in ascending order. Use A, B and C as arguments in the function.

Question 9 Suppose X. Y, Z are arrays of integers of size M, N, and M + N respectively. The numbers in array X and Y appear in descending order. Write a user-defined function in C/C++ to produce third array Z by merging arrays X and Y in descending order.

Question 10 Given two arrays of integers A and B of sizes M and N respectively. Write a function named MIX () with four arguments, which will produce a third array named C. such that the following sequence is followed.
All even numbers of A from left to right are copied into C from left to right.
All odd numbers of A from left to right are copied into C from right to left.
All even numbers of B from left to right are copied into C from left to right.
All old numbers of B from left to right are copied into C from right to left.
A, B and C are passed as arguments to MIX (). e.g., A is {3, 2, 1, 7, 6, 3} and B is {9, 3, 5, 6, 2, 8, 10} the resultant array C is {2, 6, 6, 2, 8, 10, 5, 3, 9, 3, 7, 1, 3}