

Homework Assignment 14

Q1. State True/False :

- i. If a pointer **p** points to the array **arr**, one can use both **p++** and **arr++** to navigate the array
- ii. For the array **arr**, the expression **arr+5** equates to **&arr[5]**
- iii. If an array is not declared in main with **const** qualifier, a function cannot be prevented from modifying it
- iv. The function call **f(**p,**q)** can be used to swap two pointers

Q2. Fill in the blanks.

- i. A function can swap two pointers only if it is passed ----- to these pointers
- ii. A function can return a pointer provided it doesn't point to a ----variable or object of the function
- ii. For a pointer to be interpreted as array, the pointer must point to a ----- section of the memory
- iii. A generic pointer is declared using the keyword -----

Q3. Answer the following :

- i. if the variable **x** and the array **arr** have the same data type, which of the following operations are permitted?

a. x = *(arr+5);

b. *(arr+5) = x;

- ii. Can we use the following statements ? If not why?

int i=50; int *p = &i; p[4] = 100;

- iii. The following doesn't always fall? Why?

int *p;

printf("%d",*p);

- iv. If the pointer **p** points to an array **arr**, explain how pointer arithmetic works better with **p** than **arr**

- v. How can two be swapped using a function Why can't the standard techniques of using two pointers as arguments work here?

- v. Explain how the use of **const** differs between the declaration of a variable in main and a parameter of a function.

Q4. Write a program that initializes a 2D array **arr[3][5]**, uses a pointer to this array in a single loop to print all elements. What does the output indicate about organization of the 2D array.