**Q1) [15 points] Choose the most correct answer from the following:**

1. Given the following function

**void f(int x, int \*y, int &z){ x++; (\*y)++; z++; }**

What is the output after executing the following segment?

**int x=2, y=4, z=8;**

**f(x,&y,z);**

**cout<<x<<y<<z;**

a. 2 5 9 b. 3 5 9 c. 2 5 8 d. 2 8 5

2. Given **FILE \*p=fopen (“a.dat”,” w+”);**

The file is opened for:

a. read only

b. write only

c. write and read with losing the original data

d. read and write without losing the original data

3. What does the following print?

**int A[ ]={10,20,30,70,60,80};**

**int \*p=A+2;**

**\*p+=\*A;**

**cout<<(\*p);**

a. 40 b. 60 c. 90 d. compiler error

4. Given the function prototype: **int test(char \*, int, int \*);**

Assume: **int I=2, J=3; char ch=’A’;**

Which of the following is a valid call to the function **test**?

a. I=test(‘A’, 10, J); b. J=\*test(&ch,&I,&J);

c. I=test(&ch,5,&J); d. test(ch,I,&J);

5. What does the following print?

**char \*x= ”ABCDEFG”; cout<<x+3;**

a. D b. C c. DEFG d. CDEFG

6. Which of the following functions is valid?

a. void f(int a[][]){ a[0][0]=1;} b. void f(int a[5][]){ a[0][0]=1;}

c. void f(int a[][5]){ a[0][0]=1;} d. void f(int a[int n][int m]){a[0][0]=1;}

7. To store the names of 12 students where each name does not exceed 50 characters, the correct declaration that can store the names is:

a. char N[12]; b. char N[12][50];

c. char N[50]; d. char N[50][12];

8. To write the value 15 to a text file named “abc.txt” that is pointed to by fptr, we write:

a. fprintf(“abc.txt”,15); b. fprintf(fptr,15);

c. fprintf(fptr,”%d”,15); d. fprintf(fptr,”%s”,15);

9. Given

**double a[10];**

**double \*p=a+3;**

Assume that array **a** is located at address **3100**.

What address the pointer **p** is pointing to?

a) 3103 b) 3108 c) 3124 d) 3112

10. Consider the definition **int \*\*B;**

Which of the following is valid?

a) B=new int [4]; b) B= new \* int[5];

c) B= new int \*[6]; d) None of the above

11. Given

int B[10][20] = { { 1,2,3}, {4,5,6,7,8},{9,10,11}};

What is the output of cout<< B[2]; ?

a) 4 5 6 7 8 b) The address of the array containing 4 5 6 7 8

c) 9 10 11 d) The address of the array containing 9 10 11

12. typedef is often:

a) used for creating synonyms for previously defined data type.

b) used for creating alias to previously defined variable.

c) used to create a new data type.

d) None of the above

13. To reset file position pointer to beginning of file, we use:

a) rewind(FILE pointer);

b) re-open the file

c) re-define the file pointer

d) answer(a) and answer (b)

14. Choose the correct statement; regarding a text file opened for "r+" using the file pointer (fptr).

a) Opening a text file successfully, make fptr = EOF.

b) You should know the size of the file if you want to read all data from it.

c) File position pointer could move forward and backward.

d) If the file already contains data its contents are lost.

15. The value returned by fopen is of type:

a. int \* b. char \* c. FILE \* d. file \*

Q2 [4 points]

Given **int A[10][15]={…};** Write a code segment to count the number of rows in A having a negative total summation.

Q3 [3 points] Given

**char \*\*N;**

**N = new char \*[10];**

**for(int I=0; I<10; I++) N[I]=new char[100];**

Write a code segment to deallocate all dynamic memory allocated as a result of executing the code segment above.

Q4 [6 points] complete the following function. It will create a 2-dimentional dynamic character array to store the words in a file passed as parameter (each word in one row). The function will return a pointer to the created array, and the number of words in the file as pass-by-address parameter.

Assume that the maximum number of characters in each word is 99 characters.

char \*\* words(char \* filename, int \*no)

{