**Programming Fundamentals**

**Assignment1**

Q1) What is the output of the program below:

int g\_arr[5]={5,9};

int main()

{

int arr[5] = {4,9,1};

cout<<arr[2] <<“ “ <<arr[4]<<endl;

cout<<g\_arr[1] <<g\_arr[3];

return 0;

}

Q2) What is the output of the program below:

int main()

{

int arr[5] = {42,19,11};

cout<<arr[5] <<arr[6];

return 0;

}

Q3) What is the output of the program below:

int main()

{

int y = 1;

switch(y)

{

cout<< “This is C++” <<endl;

case 1:

cout<< “hey”;

break;

case 2:

cout<< “hello”;

break;

}

return 0;

}

Q4) What is output of program given below:

int main()

{

unsigned char ch = 255;

while(++ch!=0)

{

cout<<++ch<<" ";

}

return 0;

}

What will be the output if the condition of the while loop is changed to (ch++!=0)

Q5) How many times will “Hello” be printed?

int main()

{

int x;

for (x = -1; x <= 10; ++x)

{

if (x<5)

continue;

else

break;

cout<< “Hello” <<endl;

}

return 0;

}

Q6) What is the output of program below:

int main()

{

intarr[]={2};

cout<< 0[arr]<<endl;

cout<< “hello”+3;

cout<<endl<<“hi\0all”;

cout<<endl << sizeof(5.4);

return 0;

}

Q7) What is output of below program:

int main()

{

int a[] = {2,3,4};

int b[] = {2,3,4};

if(a==b)

{

cout<< “equal”;

}

else

{

cout<< “unequal”;

}

}

Q8) What is the output of the program given below:

void count()

{

static int count1 = 0;

int count2 = 0;

count1++;

count2++;

cout<< "\nValue of count1 is” << count1,

cout<<“\nValue of count2 is” << count2;

}

int main()

{

count();

count();

count();

return 0;

}

Q9) What is the output of the program below:

#define max 5

int main()

{

int i=0;

i=max++;

cout<< i++;

return 0;

}

Q10) What is the output of the program below:

int main()

{

int a,b;

a=1,3,15;

b=(2,4,6);

cout<<a+b;

return 0;

}

Q11) What is the output of the program below:

int main()

{

if(cout<<"C++")

cout<< "programming”;

else

cout<< "Language";

return 0;

}

Q12) What least positive integer (except 97) could replace the ?in the code below to display ‘a’ on the screen?

int main()

{

char c = ?;

cout<<c;

return 0;

}

Q13) What is the output of the program below:

int main()

{

int i=2,j=2;

while(i+1?--i:j++)

cout<< i;

return 0;

}

Q14) What is output of program below:

int r();

int main()

{

for(r();r();r()) {

cout<< r() <<endl;

}

return 0;

}

int r(){

int static num=7;

return num--;}

Q15) Array of 5 integers is to be passed to an a function. Which of these are invalid function prototypes.

1. void f(int a[])
2. void f(int a[5])
3. void f(int a[6])
4. void f(int a[2])
5. void f(int a[0])
6. void f(int a)
7. void f(int \*a)

Q16) What is output of below program:

int main()

{

char str[]={'a','b','c'};

char str1[]="abc";

cout << sizeof(str) << endl;

cout << sizeof(str1);

return 0;

}

Q17) Write a program to display “hello” to the user without using a semicolon anywhere in the code (except for “using namespace std;”).

Q18) Write a program to print the pattern below:

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Q19) Write a program to find whether the year entered by user is a leap year or not.

Q20) Write a program to find if two strings entered by user are anagrams.

Q21) Write a program to display vowels in the string entered by user and the number of times each vowel occurs in the string.

Q22) Write a program to add, subtract and multiply two matrices.

Q23) Write a program to find nth (input n from user) power of the number entered by user without using the already defined pow function in math.h.

Q24) Write a program to find the age of a person in years, months and days. Input the person’s DOB and present date, month and year.

Q25) Write a program that replaces each vowel in the text present in a file with the character ‘#’.

Q26) Write a program that accepts string from user as command line arguments, finds the strings which are palindromes and writes them to a file, separated by new lines. Implementation should be done using subfunctions.

For example if the arguments given by user are: hello hi nitin bye naman, then the program should create a file with the following contents:

nitin

naman

Q27) Write a program to concatenate the contents of two files to a third file. For example:

file1 file2

hello all welcome

here

Then file3 must contain

hello all

welcome

here

Q28) Write a function that concatenates two integer arrays into a third array in such a way that the smaller size array elements follow the larger one, for example:

Array1: 11,16

Array2: 12,20,34,56,78,90

Target Array3: 12,20,34,56,78,90,11,16