Note: Answer five questions (Question one must answer it).

Q1: Write the output of the following programs with trace:

| a. | # include <iostream.h>  
|    | void main()  
|    | { int n=5; int m=n++;  
|    | cout<<n<<"\n"<<m<<"\n";  
|    | cout<<n<<"\n"<<m<<"\n";  
|    | } (2.5 m) |
| b. | # include <iostream.h>  
|    | void main()  
|    | { for (i=0;i<8;i++)  
|    | if((%62 == 0) cout<<1<<endl;  
|    | else if(%63 == 0) cout<<1<<endl;  
|    | else cout<<2<<endl;  
|    | } (2.5 m) |
| c. | # include <iostream.h>  
|    | void test(int a, int *b, int *c)  
|    | { if((a>b)->(*c=b))  
|    | {a=10;*c=5;} else (*b=*c; *c=1; }  
|    | void main()  
|    | { int x=3,y=2,z=3; test(x,&y,&z);  
|    | cout<<x<<y<<z;  
|    | } (2.5 m) |
| d. | # include <iostream.h>  
|    | void main()  
|    | { int i,j,k; for(i=10;i>=1;i--)  
|    | for(j=1;j<=10;j++) cout<<"*";  
|    | for(k=1;k<=10;k++) cout<<"*"; cout<<"\n";  
|    | return 0; } (2.5 m) |

Q2: (a): Define set precision and give a simple program to show this function.
(b): Write a complete program in C++ to convert number form decimal to binary number and print in order right.

Q3: (a): Define the enumerated data types, and write a C++ program to display the number of each season.
(b): Write a C++ program to build a recursive function to find GCD of two integers.

Q4: (a): Find the errors and correct them:

1. int a[3]={1,2,4,77,9}; cin>>a;  
2. *(a[0]+3)=10;  
3. int new=50  
4. cout<<"Hello, /* change */ world. \n";  
5. int x; int xp; xp=x;  

(b): Develop a program in C++ to read the following information (using structure) emp_name, emp_code, birthday (dd,mm,yyyy), years of experience, age. Then read this information for ten employees and print the code for the oldest one.

Q5: (a): Read (n) no’s and print how many positive ones. Draw a flowchart for it.
(b): You have two arrays X[3] and Y[n], for each value in array X find out how many times this value of X accure in array Y. Write a complete program to solve this problem.

Q6: (a): Write a program in C++ that read a value X in inches, and then convert it to centimeters. (Hint: 1 inch = 2.54 cm).
(b): Write a C++ program using function to inverse an integer number (7654→4567).

GOODLUCK