

ASSIGNMENT 3

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QUESTION 1

1 2 4 3 5

QUESTION 2

(a) 10.3457

(b) 5

(c) 10.3,

(d) 51.7283

(e) 10.345670

QUESTION 3

OUTPUT 1: ABCDEFG

OUTPUT 2: ABCDEFG HIJK

OUTPUT 3: ABCDEFG

QUESTION 4

```
// Program 2

#include <iostream>

using namespace std;

int main()
{
    cout << "Success\n";

    cout << "Success\n\n";

    cout << "Success";

    cout << " Success\n";

    return 0; }
```

QUESTION 5

Conditional expression

i.

If score is above 50, then number of Pass will be increased and "Pass" will be printed, otherwise it will increase and print out "Please try again."

ii.

If cpa is above 2.0 then it will get whether cpa is above 3.5, if it is it will print "Dean's List", otherwise it will print "Normal Pass". If cpa is above 1.7 it will print "Probation", otherwise it will print "Fail".

QUESTION 6

i.

```
if(freq >= 100 && freq <= 1000)
{
    cout << "Acceptable" << endl;
}
else {
    cout << "Unacceptable" << endl;
}
```

ii.

```
if((age >= 18 && age <= 30 ) && (weight >= 50 && weight <= 65) &&
height > 156){
    cout << "Fullfill requirements" << endl;
} else {
    cout << "Do not fulfill" << endl;
}
```

iii.

```
int year; //variables
float cc; //variables
if (year>2010) //get year
if (cc>1.5 && cc<2)
cout<<"Purchase car";
else
cout<<"Do not purchase car";
if (year<2010) //get year again
if (cc>2)
cout<<"Purchase car";
else
cout<<"Do not purchase car";
```

QUESTION 8

OUTPUT

1.	No
2.	1
3.	117

QUESTION 9

// Question 9.a. – [8 marks]

```
int x = 15;                                //(a)

do {

x--;

if (x % 2 == 1;                            // (b) and (c)

continue;

cout << x << " ";

} while (x >= 4);                          // (d)

)
```

// Question 9.b. – [6 marks]

```
int y = 2;

do {

if (y > 256)                               //(a)

break;

cout << y << " ";

y = y*y;                                   //(b)

} while (y >= 0);                           //(c)
```

QUESTION 10

i.

```
#include <iostream>

using namespace std;

int main()
{
    int i;//variables
    int sum; //variables
    sum =0;
    i=5;//
    while (i<10)//using while loop
    {
        sum=sum+1; //increment
        i=i+2;
    }
    cout<<sum; //print sum
    return 0;
}
```

ii.

=> 3 times, because i is initialize with 5 and loop will continue till i<10 with increment value of i +2 in each iteration.

iii.

```
#include <iostream>

using namespace std;

int main ()
{
```

```
int i, sum; //variables

sum = 0;

i=10;


while(i > 5) //using loop
{
    sum = sum + 1; //increment
    i = i - 2; //Using decrement counter loop
}

cout<<sum;

return 0;

}
```

QUESTION 11

a. while (grade!='e')

b. switch (grade)

c. case 'A' _:

d. ++aCount ;

e. break;

g. ++bCount ;

h. break;

i. case 'C' :

j. ++cCount ;

k. break;

l. default :

m. cout<<"Incorrect letter grade entered."

o. cout << "Enter the letter grades

[Enter 'e' character to end input]"<< endl;

p. Cin>>grade;

q. Cout<<"A:"<<aCount<<endl;

r. Cout<<"B:"<<bCount<<endl;

s. Cout<<"C:"<<cCount<<endl;

QUESTION 12

i.

```
#include <iostream>
```

ii.

```
while (userVal != EXIT)
```

```
{
```

```
if (userVal < LOW || userVal>HIGH)
```

```
{
```

```
extremeCnt++;
```



```
}  
  
sum += userVal;  
  
num++;  
  
cout << "Enter a number (" << 0 << " to quit): ";  
  
cin >> userVal;  
  
}
```

iii.

```
avg =(double) ((double)sum / (double)num);  
46 cout <<endl<< "Average is: " << avg << endl;  
47 cout << "There were " << extremeCnt << " extreme values" << endl;  
48 return 0;  
49 } //end main
```