

Exam 2
EET 122
Time: 1 hour and 30 minutes

Name:

N.B: Test 2 includes altogether 4 questions: 2 programs and 2 short type questions.

1. Write a program to find the sum of all integers between 1 and 50 that are divisible by both 4 and 5. You also need to print/show the numbers as well. Check the sample output for a better understanding. Name this project as test2_A. (35 Points)

Sample Output:

```
Numbers between 1 and 50, divisible by both 4 and 5:  
20 40  
The sum is: 60
```

2. Write a program to read a string (line of text) from the keyboard and count the occurrences of lower case characters 'a', 'e', and 'i'. Name this project as test2_B. (40 Points)

Sample Input/output 1 (input in red color):

```
Enter a line of text: Breaking Bad is a Popular TV Series  
Number of 'a' on the line: 4  
Number of 'e' on the line: 3  
Number of 'i' on the line: 3
```

Sample Input/output 2 (input in red color):

```
Enter a line of text: abc 123 def 456  
Number of 'a' on the line: 1  
Number of 'e' on the line: 1  
Number of 'i' on the line: 0
```

3. What output will be produced by following code, when embedded in a complete program? (13 Points)

```
void multiply (int x, int y);
int main()
{
    int a = 3, b = 4;
    multiply(a,b);
}

void multiply (int x, int y)
{
    int z = x * x + y * y;
    cout<<"The value of z is:"<<z;
}
```

4. What output will be produced by following code, when embedded in a complete program? (12 Points)

```
int main()
{
    int a =10, b=5;
    increment(&a,&b);
    cout<<"a= "<<a<<endl;
    cout<<"b= "<<b<<endl;
}

void increment(int *p, int *q)
{
    *p=*p+*q;
}
```