**CHAPTER I**

**UNCERTAIN INTEGRAL**

**Main Formula :**

1. 
2. 
3. 
4. 
5. 

**Extended Formula :**

1. 
2. 
3. 
4. 
5. 

**Substitution Formula**

Substitute : u = f(x) du = f’(x)dx

1. 
2. 
3. 
4. 
5. 

**Examples :**

1. 

Or :

Subst : u = ( 2 + x3 ) du=3x2



1. 

 = 

or :

Subst : u = 1 – x2 du = - 2x dx  x dx = - ½ du

 

1. 

or :

Subst : u = x2 + 1du = 2x dx



1. 

Or:

Subst : u = x2 – 2x + 3  du = (2x – 2)dx  (x – 1) dx = ½ du

 

1. 

Or:

Subst : u = 3x + 2  du = 3 dx  dx = 1/3 du



1. 

Or:

Subst : u = x2 + 1  du = 2x dx  x.dx = 1/2 du



1. 

 = 

Or:

Subst : u = 1 - 3x du = - 3dx dx = - 1/3 du



Examination :

1.  6. 
2.  7. 
3.  8. 
4.  9. 
5.  10. 

**PARTIAL INTEGRAL**

Partial Integral’s Formula:

 

Examples:

1. 

Subst : u = x du = dx

 dv = sin x dx  v = - cos x



 

1. 

Subst : u = 1nx du = 1/x dx

 dv = dx  v = x



 



1. 

Subst : u = x du = dx

 dv = cos x dx v = sin x



1. 

Subst : u = x2 du = 2x . dx

 dv = sin x dx v = - cos x



 (dari contoh 4)

 



1. 

Subst : u = ex du = ex . dx

 dv = sin x dx v = - cos x







2

