

NAME : PRATHAPANI SATWIKA

REG.NO : 20BCD7160

**EXPERIMENT NO. 3 -APPLICATIONS TO
INTEGRAL CALCULUS**

1.

```
1 - clc
2 - clear all
3 - syms x y
4 - fprintf('20BCD7160 Prathapani Satwika')
5 - int(int(3-x-y,x,y,1),y,0,1)
```

Command Window

```
20BCD7160 Prathapani Satwika
```

```
ans =
```

```
1
```

```
fx >> |
```

2.

```
1 - clc
2 - clear all
3 - syms x y z
4 - fprintf('20BCD7160 Prathapani Satwika')
5 - int(int(int(1,z,(x^2)+3*(y^2),8-(x^2)-(y^2)),...
6     x,-sqrt(4-2*(y^2)),sqrt(4-2*(y^2))),y,-sqrt(2),sqrt(2))
```

Command Window

20BCD7160 Prathapani Satwika

ans =

$8\pi \cdot 2^{1/2}$

fx >>

3.

```
1 -   clc
2 -   clear all
3 -   syms x y z xyz
4 -   fprintf('20BCD7160 Prathapani Satwika')
5 -   vol=int(int(int(1,z,0,2),y,0,2),x,0,2)
6 -   avg=int(int(int(x*y*z,z,0,2),y,0,2),x,0,2)
```

Command Window

20BCD7160 Prathapani Satwika

vol =

8

avg =

8

fx >>