



**F.Y.B.TECH. / SEM - I / ENGINEERING MATHEMATICS - I / SCILAB PRACTICAL / AY: 2020-21**

**NAME OF EXERCISE :** Newton Raphson Method

**NAME OF STUDENT :** AYUSH JAIN

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**BRANCH :** Computer Science

**DIV :** J

**DATE :** 05-04-2021

**QUESTION:**

Find the root of the equation  $f(x) = x^5 - x^2 - 3 = 0$  by using Newton Raphson Method

**CODE:**

```
deff("y = f(x)", "y = x^5 - x^2 - 3")
deff("y = fd(x)", "y = 5*x^4 - 2*x")
x = 1
xx = 0
i = 0
eps = 0.001
while(abs(x-xx)>eps)
    r = x - (f(x)/fd(x))
    disp(r)
    xx = x
    x = r
    i = i + 1
end
disp("No. of iteration = ", i)
disp("Root of the equation = ", x)
```

**OUTPUT:**

```
2.
1.6710526
1.4680060
1.3860401
1.3736504
1.3733915
"No. of iteration = "
6.
"Root of the equation = "
1.3733915
```



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```
Scilab 6.1.0 Console
File Edit Control Applications ?
[Icons]
Scilab 6.1.0 Console

Startup execution:
loading initial environment

--> exec('C:\Users\AYUSH JAIN\OneDrive\Desktop\SCILAb4.sce', -1)

2.

1.6710526

1.4680060

1.3860401

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--> |
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