

IS/ENG02/005

Computer Engineering

ENG 882 Assignment.1.

1.  $f(y) = \cos(y)$

$$\cos y = 0$$

$$y = \cos ; +y$$

$$y_i + 1 \neq \text{ends}$$

with guess value of  $y = 0.05$ ;

$$y_i + 1 = \cos(0.05) + 0.05$$

$$= 1.0500$$

When  $y_i = 1.0500$

$$y_i + 1 = \cos(1.05) + 1.05$$

$$= 2.0498$$

When  $y_i = 2.0498$

$$y_i + 1 = \cos(2.0498) + 2.0498$$

$$= 3.04916$$

When  $y_i = 3.04916$

$$y_i + 1 = \cos(3.04916) + 3.04916$$

$$= 4.0477$$

When  $y_i = 4.0477$

$$y_i + 1 = \cos(4.0477) + 4.0477$$

$$= 5.0453$$

2.  $f(z) = e^{-1.5z} - 2 + \cos(z)$

$$e^{-1.5} - 2 + \cos(z) = 0$$

$$z = e^{-1.5z} + \cos(z)$$

$$z_i + 1 = e^{-1.5z_i} + \cos(z_i)$$

with a guess value of  $z = 0.1$

$$z_i + 1 = e^{-1.5(0.1)} + \cos(0.1)$$

$$= 1.2231$$

When  $z_1 = 1.2281$

$$z_1 + 1 = e^{-1.5(1.2281)} + \cos(1.2281) \\ = 0.98198$$

When  $z_1 = 0.9998$

$$z_1 + 1 = e^{-1.5(0.9998)} + \cos(0.9998) \\ = 0.99985$$

When  $z_1 = 0.99985$

$$z_1 + 1 = e^{-1.5(0.99985)} + \cos(0.99985)$$

When  $z_1 = 0.99985$

$$z_1 + 1 = e^{-1.5(0.99985)} + \cos(0.99985)$$