Benha University
Faculty of Engineering- Shoubra
( Electrical )Engineering Department


Mid term exam
Mathematics (3-B)
Date: March 2013
Code: EMP 272
Duration : 1 hours
Answer all the following questions
No. of questions : 2
Total Mark: 20
I) Solve the system of equations $-2 y+10 z=47-3 x, 5 x+2 z=15, x-2 z=5 y-24$ using
a) Crout's method
b) Gauss seidel method $\quad\left[\operatorname{take}(\mathrm{y}, \mathrm{z})^{(0)}=(2.853,5.221)\right]$
II) Solve the following D.E. using Picard method and find $\mathbf{y}(\mathbf{0 . 2})$ using Euler $\{$ take $\mathbf{h}=\mathbf{0 . 0 5}\}$

$$
\mathrm{x}^{`}=\left(\mathrm{y}-3 \mathrm{t}^{2}\right)\left(\mathrm{x}-\mathrm{t}^{2}\right)+2, \quad \mathrm{y}^{`}=3\left(\mathrm{x}-\mathrm{t}^{2}\right), \quad \mathrm{x}(0)=0, \mathrm{y}(0)=1
$$

Dr. eng Khaled El Naggar

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