



Mansoura University
Faculty of Engineering

Midterm Exam.
Tuesday 27/11/2018



Biomedical Engineering Programs

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Numerical Analysis (MTH 201)

Time allowed: 60 min.

Name:

1. Given the table of readings:

x	0.5	1	1.5	2	2.5
y	0.40	0.56	0.82	1.26	1.98

(a)[5 pts] Fit these readings for the curve $y = ae^x + b$, with the computation of the L_2 - norm of the error.

(b)[5 pts] By the use of two different interpolation formulas, find $y(1.25)$ and $y(1.75)$, respectively.

2. [10 pts] Use two different methods to find the smallest positive root of the equation $e^x - 3x^2 - 1 = 0$, correct to five decimal places.