

## THE UNIVERSITY OF SYDNEY

FACULTIES OF ARTS, ECONOMICS, EDUCATION,  
ENGINEERING AND SCIENCE

## MATH3063

DIFFERENTIAL EQUATIONS &amp; BIOMATHS (N)

Semester 1

June 2011

Time Allowed: Two Hours

Lecturer: M.R. Myerscough

THIS EXAM CONSISTS OF 6 PAGES NUMBERED 1 TO 6.  
THERE ARE 4 QUESTIONS, NUMBERED 1 TO 4.

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*All 4 questions may be attempted.  
Reasons and working must be given.*

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*Each question is marked out of 20. Part marks as shown.*

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*Calculators are not permitted.*

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The following notation is assumed,

$$\dot{x} = \frac{dx}{dt}, \quad \dot{y} = \frac{dy}{dt}.$$

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