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Note:

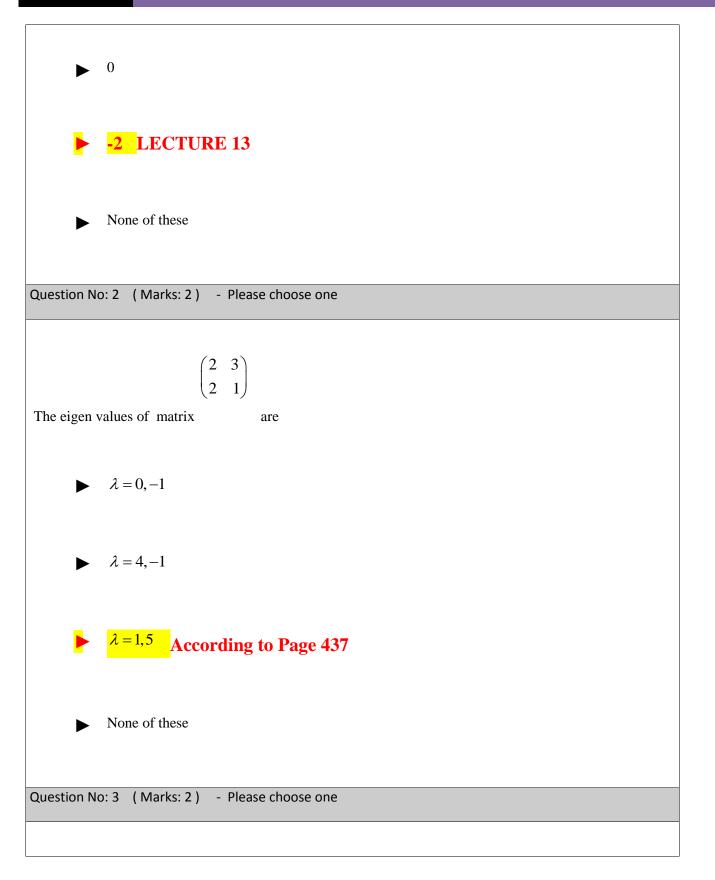
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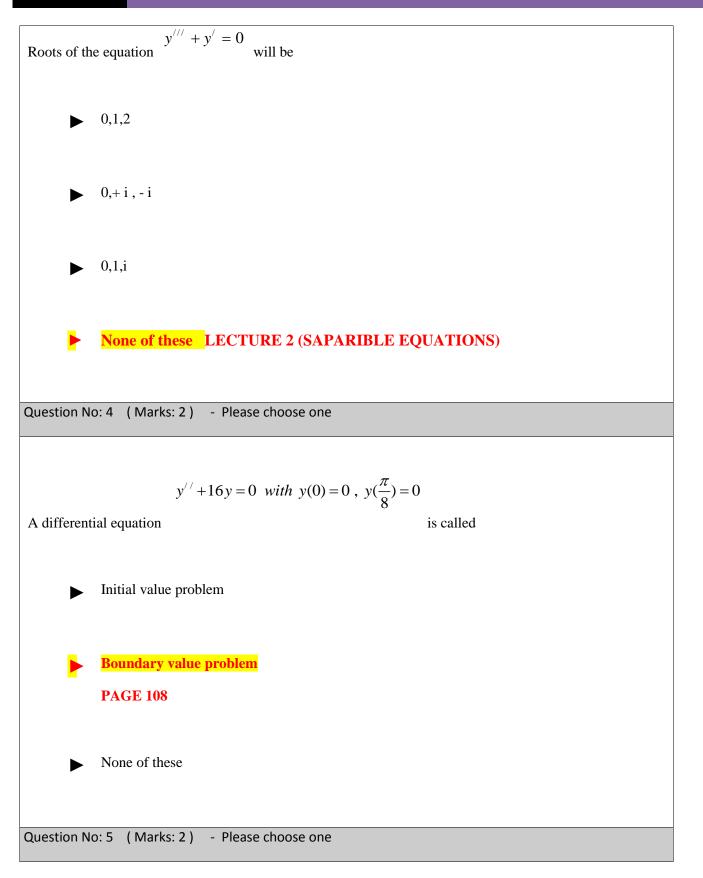
FINALTERM EXAMINATION

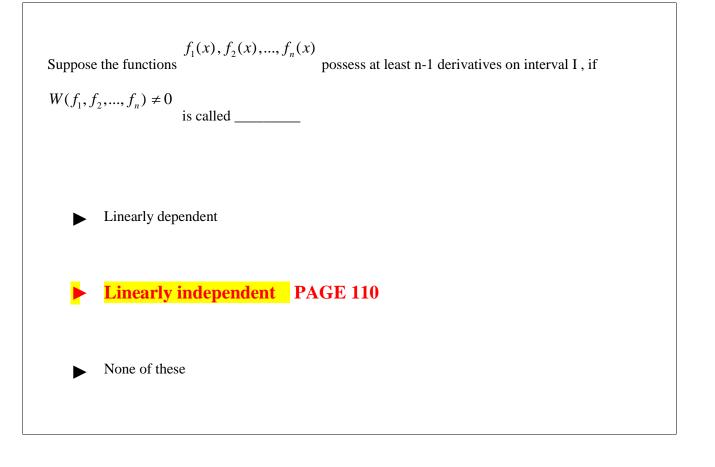
SPRING 2007

MTH401 - DIFFERENTIAL EQUATIONS (Session - 4)

Question No: 1 (Marks: 2) - Please choose one
The Wronskian of the function $W(e^x, e^{-x}) = $ is
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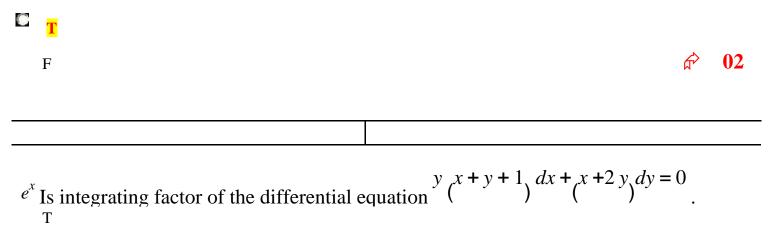






MIDTERM EXAMINATION SEMESTER FALL 2004	Total Marks: 50
MTH401- Differential Equations	Duration: 60min

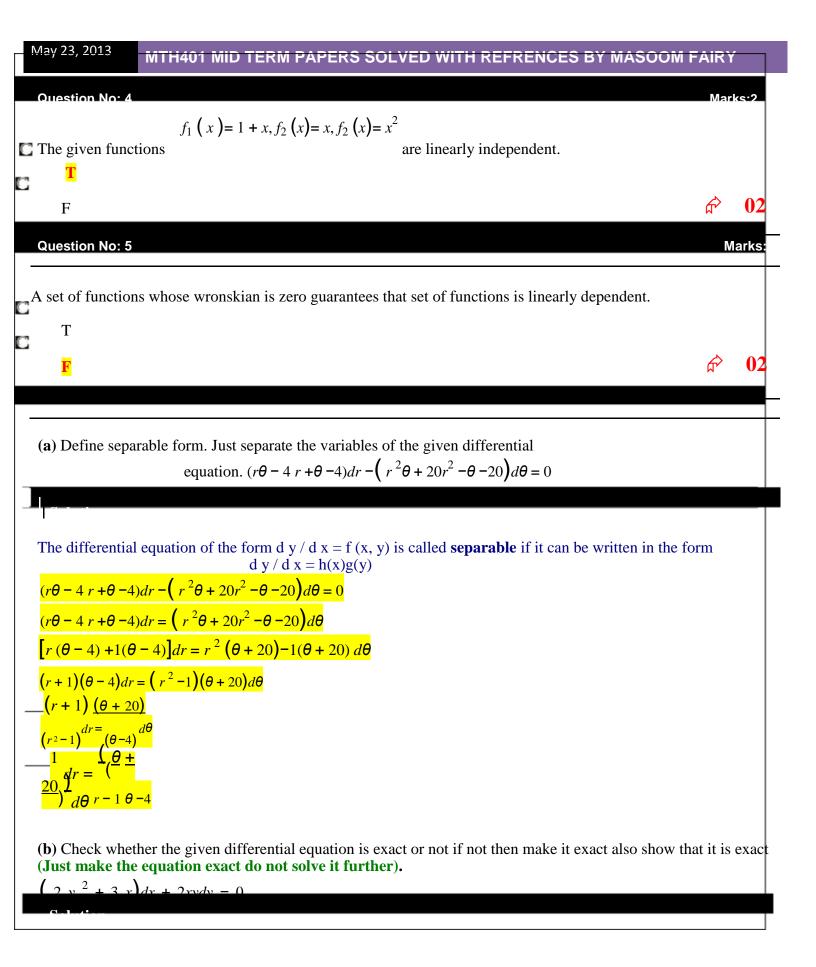
Order of the differential equation is the highest order derivative in a differential equation.

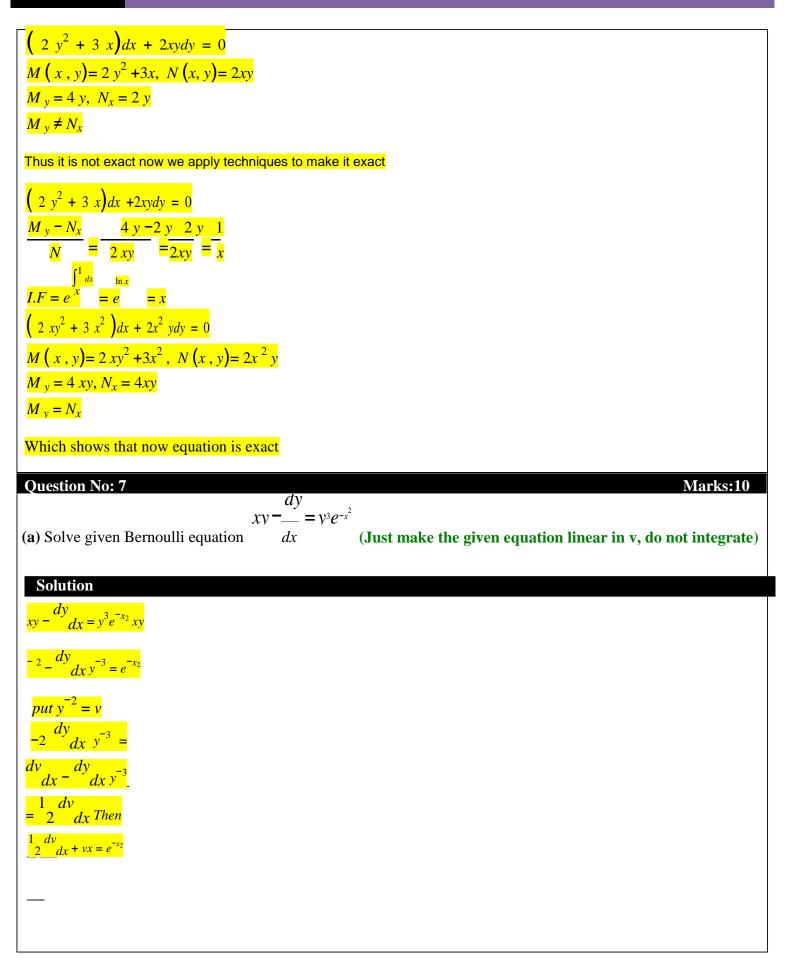


	Ŕ	02
Question No: 3	Mark	ks: 2

G(x, y, c) = 0If f_1 orthogonal intersect all curves of another family f_2 : H(x, y, c) = 0families is said to be orthogonal trajectories of the other.

□ PAGE 74 □ F □ 02

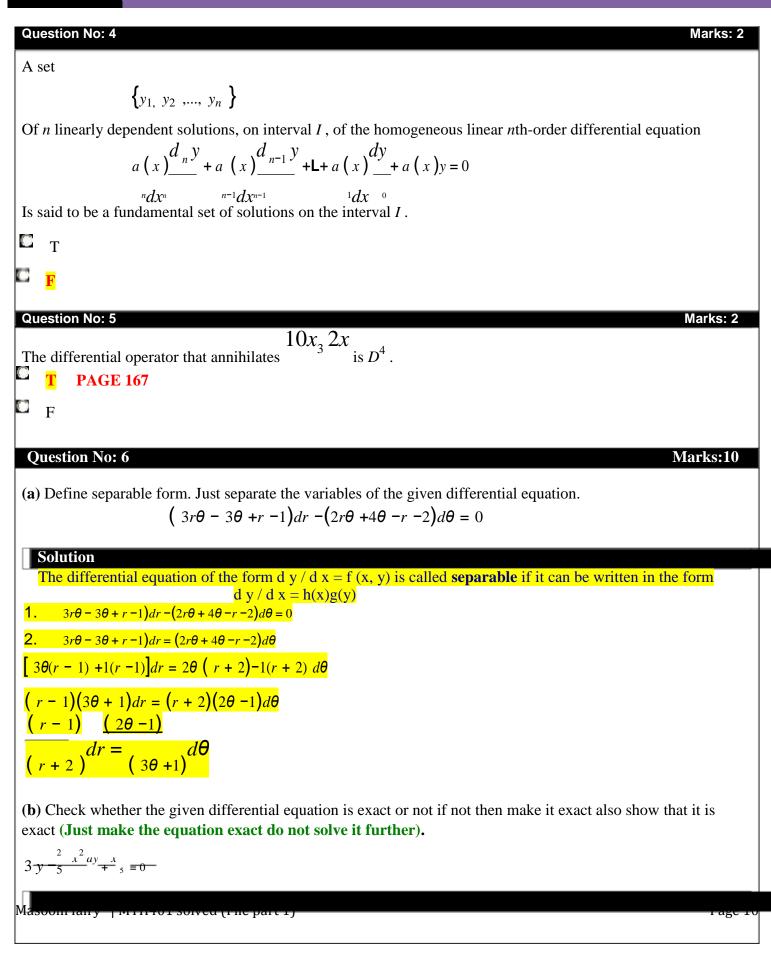




 $\frac{dv}{dx} + 2vx = 2e^{-x^2}$

Thus it is linear in "v".

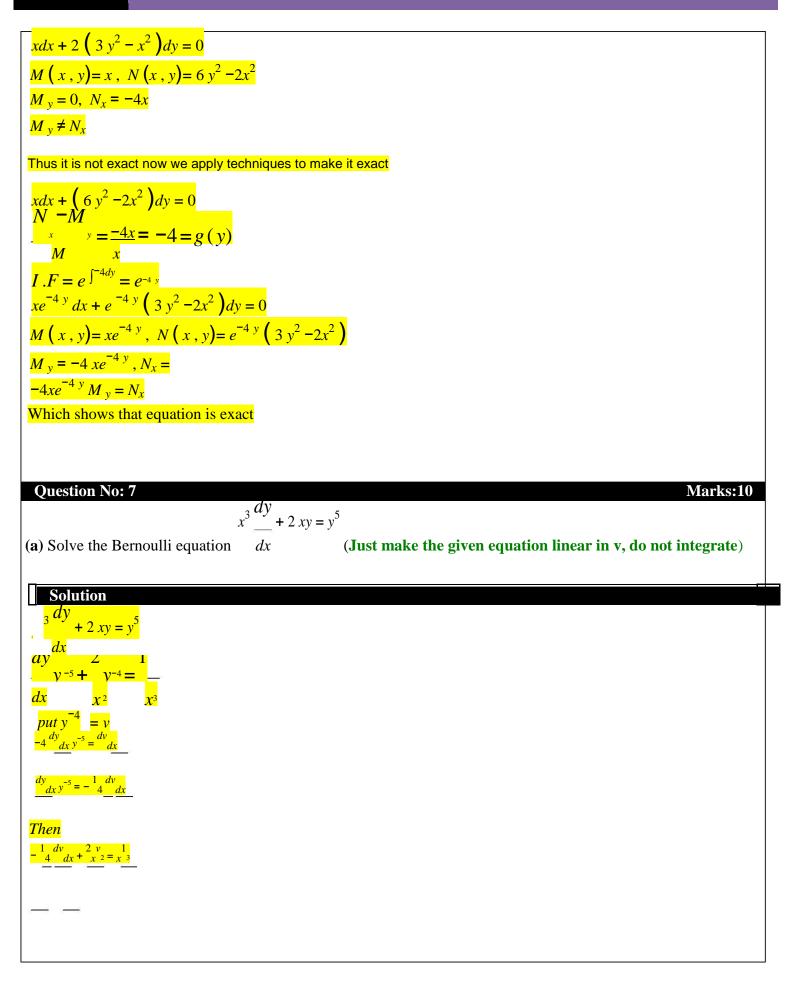
	MIDTERM EXAMINATION	
	SEMESTER FALL 2004	Total Marks: 50
	MTH401- Differential Equations	Duration: 60min
	$-y = e^x y^2$	
The differential of	equation — is not Bernoulli equation.	
Т	-	
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Question No: 2		Marks: 2
x		
$f(x, y) = \frac{x}{x + y}$	-	
$\int (x, y) - x_2 + y$	² Is homogeneous.	
C _T	is nonrogeneous.	
PAGE		
F 349		
_		
Question No: 3		Marks: 2
Population dyna	amics are not practical application of the first order differential equations.	
C T		
🖻 <mark>F</mark>		



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y dx 2 y

It can also be written as



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 $\frac{dv}{dx} - \frac{8}{x^2} \frac{v}{2} = \frac{-4}{x^3}$

Thus it is linear in "v".

MIDTERM EXAMINATION SEMESTER FALL 2004 MTH401- Differential Equations

Total Marks: 50

Duration: 60min

A differential equation said to be ordinary differential equation if it contains only ordinary derivatives with respect to single variable.

Т

F PAGE 4

A solution of the differential equation of the form y= f(x) is called the implicit solution.

Т

F PAGE 6

A relation G(x,y) is known as an implicit solution of a differential equation, if it defines one or more explicit solution on *I*.

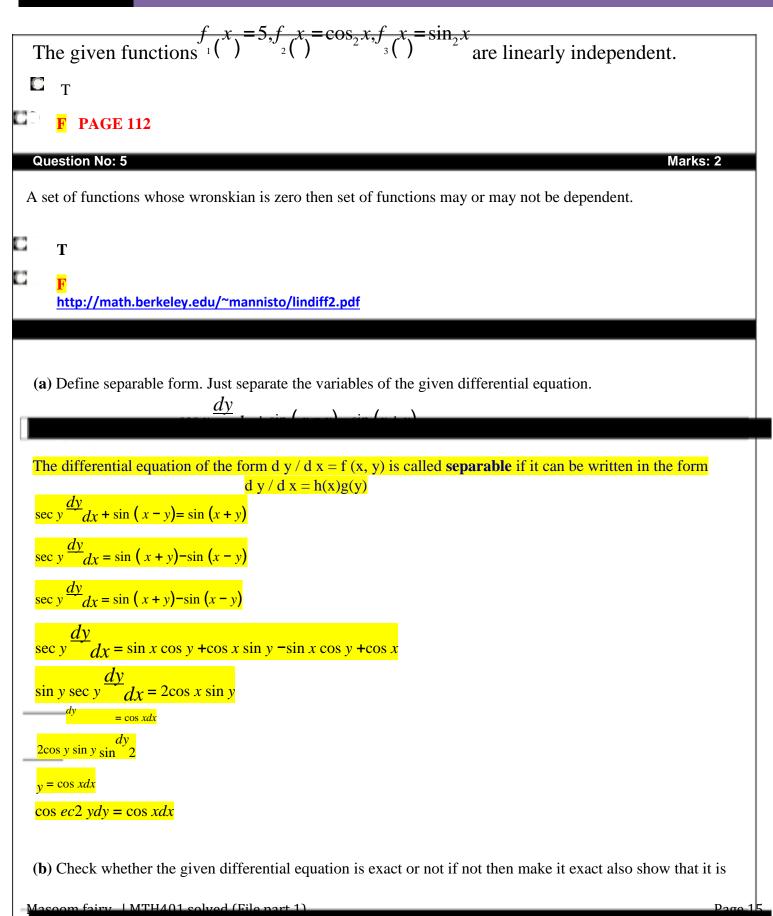
Logistic equations are applications of non-linear equations.

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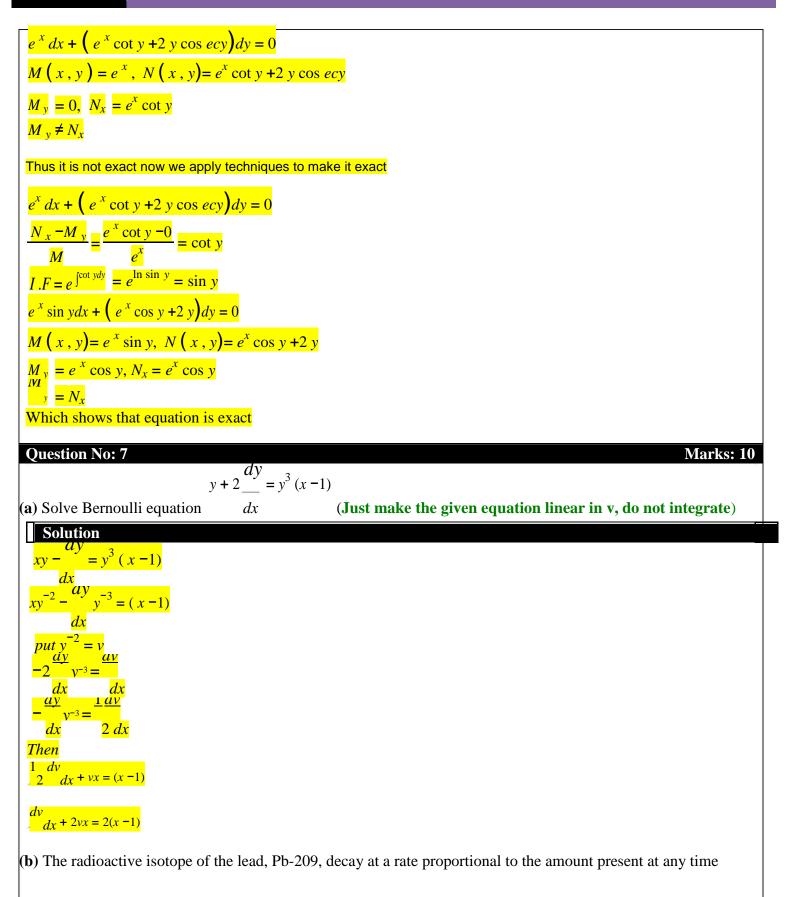
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exact (Just make the equation exact do not solve it further).

 $e^{x} dx + \left(e^{x} \cot y + 2y \cos ecy \right) dy = 0$



and has a half-life of 4 hours. If 2 grams of the lead is present initially, how long will it take for 80% of the lead to decay? (Just make the model of the radioactive decay as well as describe the given conditions do not solve further)

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BY MASOOM FAIRY

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