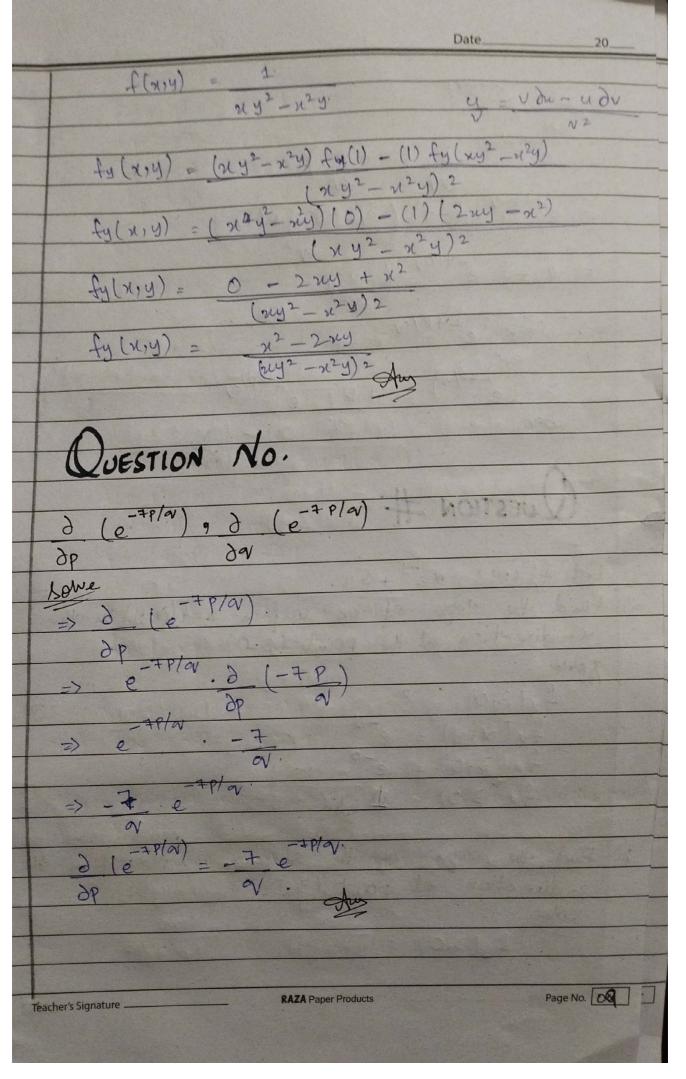
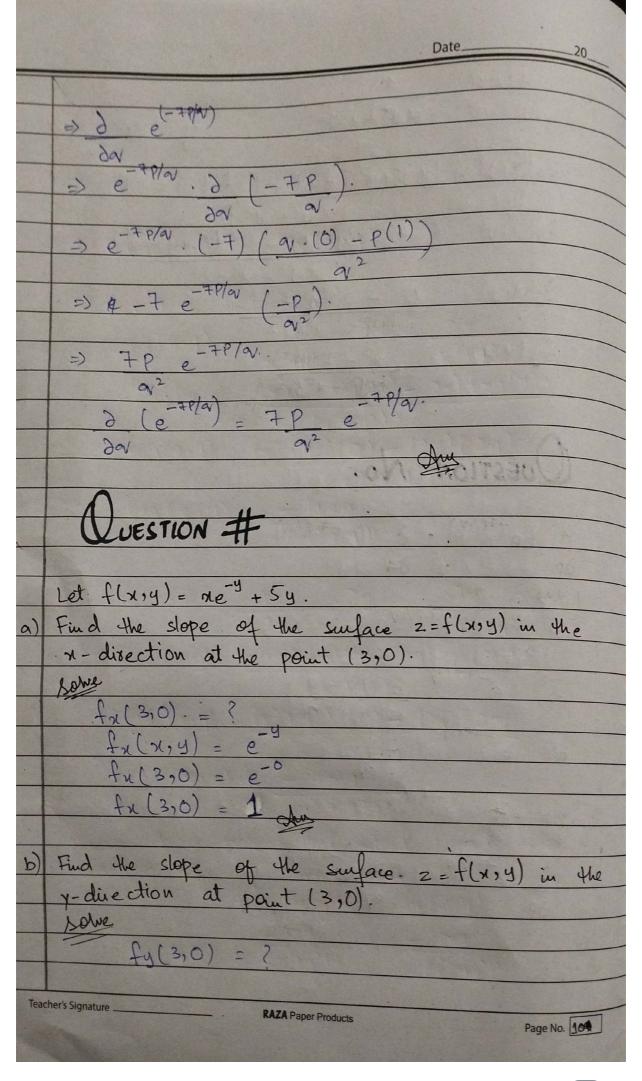
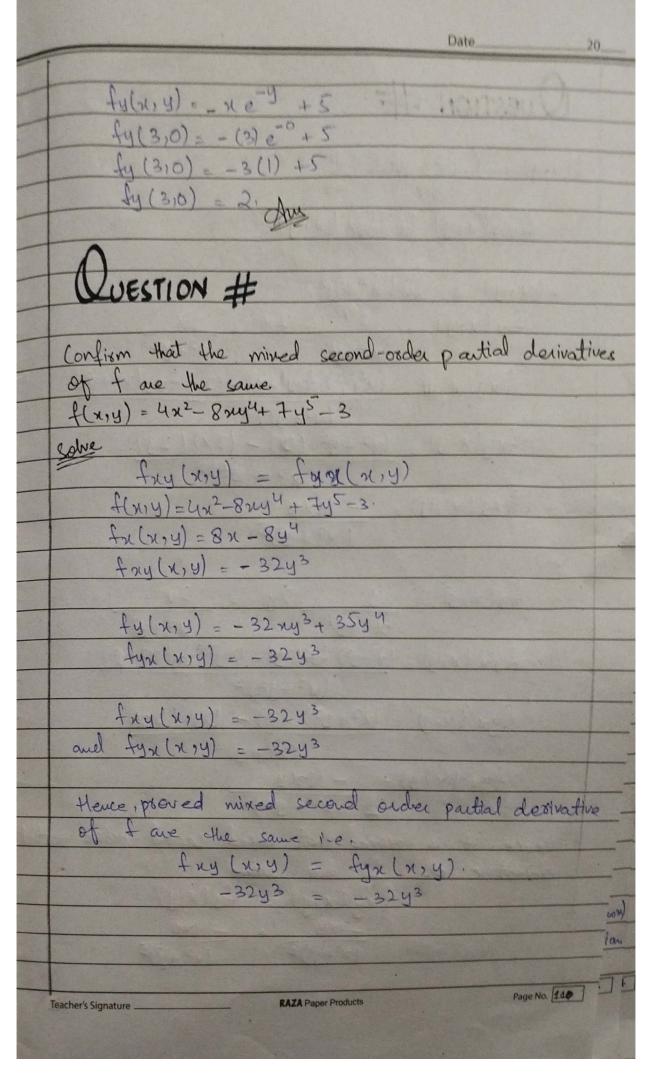
Assignm	MENT No.2 Date 20	
	PARTIAL BERIVATIVES	
TOPIC 1. 4	PHRITAL WEXIVATIVES	
0		
QUESTION	#	
Evaluate the	indicated partial desiratives.	
f(x,y) = 10x2y4	$-6xy^2 + 10x^2$; $f_x(x,y)$, $f_y(x,y)$.	
Lowe		
+(x,y) =	$\frac{10x^2y^4 - 6xy^2 + 10x^2}{20xy^4 - 6y^2 + 20x^{\frac{1}{2}}}$	
	Offin	
fy (x,y) =	$=40x^2y^3-12xy$.	
	9tus	
QUESTION =	#	
f(x,y) = 1		
20We	<i>x</i> -9	
f(x,y) =	_1_	
	24 - x24 - 4 - 4 - 4 - 4 - 4 - 12	90
fx(x,y) = ($(xy^2-x^2y) f_x(1) - (1).f_x(xy^2-x^2y)$	4
	$(xy^2 - x^2y)^2$	
fx(x1y) =	$\frac{(21y^2 - n^2y)(0) - (1)(y^2 - 2ny)}{(21y^2 - n^2y)^2}$	
fx(x,y) =		
1, (1,) =	(xy2-x2y)2	
fx (x14) =	- y2 + 2my	
	(xy2 - x2y)2 duy	
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Date 20
QUESTION #
COUSTION 1
$f(x_2y) = \ln(x^2 + y^2)$
$f_{ny}(x,y) = f_{yn}(x,y)$
$f(x,y) = \ln(x^2 + y^2).$
$+(x,y) = \ln(x+y)$
$f_{x}(x,y) = 1$ $2x = 2x$ $x^{2}+y^{2}$ $x^{2}+y^{2}$
$f_{xy}(x,y) = (x^2+y^2) \cdot f_{xy}(2x) - (2x) f_{xy}(x^2+y^2)$
(12+42)2
$f_{xy}(x,y) = (x^2 + y^2)(0) - (2x)(2y)$
$(\varkappa^2 + \varPsi^2)^2$
fry (x,y) = - 4xy
$(x^2+y^2)^2$
fu(x) - 1 . 24 = 24 .
13(7)31 - 1
$3x^{2}+y^{2} \qquad 3x^{2}+y^{2}$ $4yx(x,y) = (x^{2}+y^{2}) + (2y) - (2y) + (2x^{2}+y^{2})$
$f_{yx}(x,y) = (x^2 + y^2) f_{yx}(2y) - (xy) f_{yx}(2(2+y^2))$
fyz (x,y) = (x2+y2) (0) - (2y) (2y)
$(x^2+y)^2$
fyx (x,y) = - 4 my
$(x^2 + y^2)^2$
thence, it is proved that mixed second-order partial
derivative of I are same
fry (x14) = fy (x14)
-4ny = -4ny
$(\chi^2 + y^2)^2$ $(\chi^2 + y^2)^2$
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