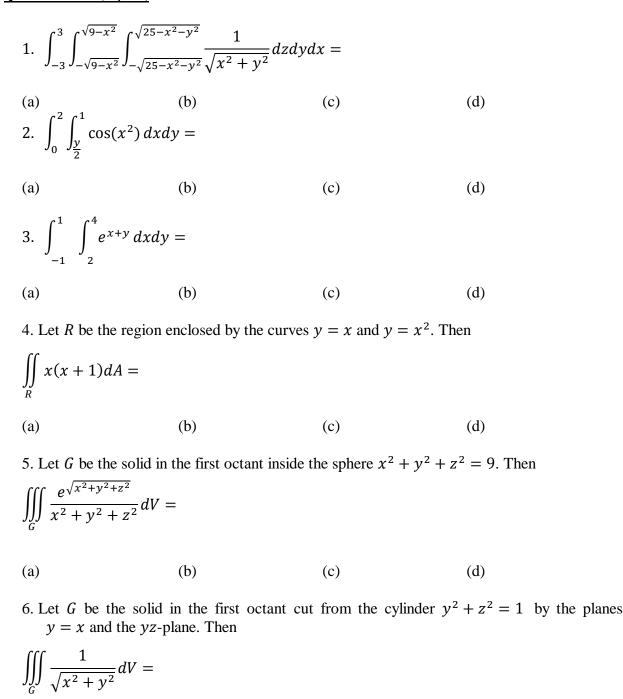
The Hashemite University	Final Exam	January 13, 2013
Department of Mathematics	Calculus (3)	Time: Two Hours.

اسم الطالب: الرقم الجامعي: رقم التسلسل:

مدرس المادة: وقت المحاضرة:

	a	b	c	d
1				
2				
3				
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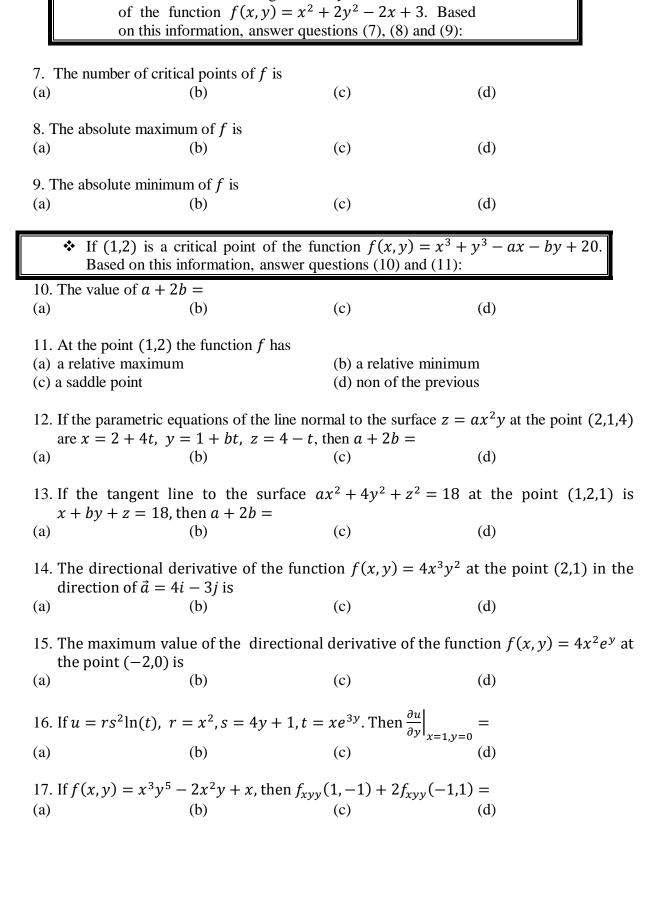


(c)

(d)

(b)

(a)



• If the closed circular region $x^2 + y^2 \le 5$ is the domain

18.	If C be the curling $\lim_{(x,y)\to(0,0)\atop \text{along }C} x^y =$	rve with parametri	c equations $x = t^2$	$+t$, $y=t$, $t \ge 0$, then			
(a)	urong c	(b)	(c)	(d)			
19.	$\lim_{(x,y,z)\to(0,0,0)} \frac{2e^{\sqrt{x^2+y}}}{\sqrt{x^2+y}}$	$\frac{\frac{1}{2+z^2}-2}{\frac{1}{2^2+z^2}} =$					
(a)		(b)	(c)	(d)			
20. (a)	If $\kappa(t)$ is the curvat	ure of the curve $x = t^2$ (b)	$(c)^{2} + 2t, y = \cos(t), z$	$= 0, \text{ then } \kappa(0) = $ (d)			
21.	21. If s is the arc length of the circular helix $\vec{r} = 2\cos(t)i + 2\sin(t)j + tk$ that has the reference point $(1,0,0)$ and the same orientation as that given for the helix, then $s =$						
(a)		(b)	(c)	(d)			
22.	22. If <i>D</i> is the distance between the line $x = 1 + 3t$, $y = -4 + 2t$, $z = -3$ and the plane $2x - 3y + 6z = -1$, then $D =$						
(a)		(b)	(c)	(d)			
23.	23. The equation of the plane through the point $(1,1,1)$ and parallel to the plane $x + y - z = 2$ is						
(a)	,	(b)	(c)	(d)			
24.	24. If <i>A</i> is the area of the parallelogram that has $\vec{u} = i - j$ and $\vec{v} = 3j + k$ as adjacent sides, then $A =$						
(a)		(b)	(c)	(d)			
25. If $(3, \frac{\pi}{3}, 4)$ is a point given in cylindrical coordinates, then the spherical coordinates of this point are							
(a)	ms point are	(b)	(c)	(d)			

End of Exam Good Luck