

**KFUPM--Term 152**

Math 201

Quiz 3(a)

Time: 20 minutes

Date: 22- 3- 16

Name	ID	Sr	Sec	Marks:- /8
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Q 1. Find the equation of the plane  $P_1$  through  $A(2, 1, -2)$  perpendicular to the vector from the origin to A. Also find an angle between the planes  $P_1$  and  $P_2: x + y = 1$ .

Q2. Find and sketch the domain of the function  $f(x, y) = \frac{\sqrt{x+y+1}}{x-1}$ . Is it a bounded domain?

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Quiz 3(b)

Time: 20 minutes

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Q 1. Find the distance from the point  $(3, -1, 4)$  to the line  $x = 4 - t, y = 3 + 2t, z = -5 + 3t$ .

Q2. Find  $\lim_{(x,y) \rightarrow (0,0)} \frac{x^2 + y^2}{\sqrt{x^2 + y^2 + 1} - 1}$ , if it exists.

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Quiz 3(c)

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Q 1. Find the distance between line:  $x = 2 + t$ ,  $y = 1 + t$ ,  $z = -\frac{1}{2}(1 + t)$  and plane:  $x + 2y + 6z = 10$ .

Q2. Find and sketch the domain of the function  $f(x, y) = x \ln(y^2 - x)$ . Is it closed or open?

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Quiz 3(d)

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Q 1. Find the distance from the plane  $x + 2y + 6z = 1$  to the plane  $x + 2y + 6z = 6$ .

Q2. Find  $\lim_{(x,y) \rightarrow (0,0)} \frac{e^{-x^2-y^2} - 1}{x^2+y^2}$ , if it exists.