

KFUPM--Term 171

Math 201

Quiz 3(a)

Time: 20 minutes

Date: 21- 11- 2017

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|------|----|------|-------|------------|
| Name | ID | Sr # | Sec # | Marks:- /6 |
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Q 1. Find all first partial derivatives of $f(x, y, z) = xy \sin^{-1}(yz)$.

Q2. If $z = x^2y + 3xy^4$, $x = 2 \sin t \cos t$, $y = \cos t$, use Chain Rule to find $\frac{dz}{dt}$ at $t = \pi$.

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Quiz 3(b)

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|------|----|------|-------|------------|
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Q 1. Verify that the conclusion of Clairaut's Theorem holds for $f(x, y) = e^{xy} \sin y$.

Q2. If $z = \tan \frac{u}{v}$, $u = 2s + 3t$, $v = 3s - 2t$, use Chain Rule to find $\frac{\partial z}{\partial t}$.

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Quiz 3(c)

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|------|----|------|-------|-----------|
| Name | ID | Sr # | Sec # | Marks: /6 |
|------|----|------|-------|-----------|

Q 1. Calculate f_{xyz} if $f(x, y, z) = e^{xyz^2}$.

Q2. If $z = xe^{y/\theta}$, $x = t^2$, $y = 1 - t$, $\theta = 1 + 2t$, use Chain Rule to find $\frac{dz}{dt}$ at $t = 1$.

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Quiz 3(d)

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Q 1. Find all first partial derivatives of $f(x, y, z, t) = \frac{ax+by^2}{cz+dt^2}$.

Q2. If $z = \tan \frac{u}{v}$, $u = 2s + 3t$, $v = 3s - 2t$, use Chain Rule to find $\frac{\partial z}{\partial s}$.