KFUPM--Term 181

Math 201 Quiz # 6(a) Time: 20 minutes Date: 11-12-2018

Name	ID #	Sr #	Sec. 09	Marks(15):-

Q1. Use polar coordinates to evaluate $I = \int_0^1 \int_0^{\sqrt{1-y^2}} cos(x^2 + y^2)\, dx\, dy.$

Q2. Evaluate $I = \int_0^1 \int_0^1 \int_{x^2}^1 xze^{zy^2}\, dy\, dx\, dz.$

Q3. Use cylindrical coordinates to evaluate $I = \int_0^1 \int_0^{\sqrt{1-y^2}} \int_{x^2+y^2}^{\sqrt{x^2+y^2}} xyz\, dz\, dx\, dy.$

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Math 201 Quiz # 6(b) Time: 20 minutes Date: 11-12-2018

Name	ID #	Sr #	Sec. 09	Marks(15):-

Q 1. Use polar coordinates to evaluate $I = \int\int_D e^{x^2+y^2}\, dA$ *where D is the unit circle centered at the origin.*

Q2. Evaluate $I = \int_0^{\pi}\int_0^{\pi}\int_0^{\pi} cos(u+v+w)\ \ du\, dv\, dw$.

Q3. Find the volume of the solid ***E*** *above the xy-plane inside both the cylinder* $x^2+y^2=1$ *and the sphere* $x^2+y^2+z^2=4$.

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Math 201 Quiz # 6(c) Time: 20 minutes Date: 11-12-2018

Name	ID #	Sr #	Sec. 13	Marks(15):-

Q 1. Use polar coordinates to evaluate $\int_0^1 \int_0^{\sqrt{1-y^2}} cos\sqrt{x^2+y^2}\, dx\, dy$.

Q2. Evaluate $I = \int_0^1 \int_{\sqrt[3]{z}}^1 \int_0^{ln\,3} \frac{e^{2x} sin\,\pi y^2}{y^2}\, dx\, dy\, dz$.

Q3. Find the volume of the solid ***E*** *above the* xy*-plane inside both the cylinder* $x^2+y^2=1$ *and the sphere* $x^2+y^2+z^2=4$.

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Math 201 Quiz # 6(d) Time: 20 minutes Date: 11-12-2018

Name	ID #	Sr #	Sec. 13	Marks(15):-

Q 1. Use polar coordinates to evaluate $\int_0^1 \int_0^{\sqrt{1-y^2}} sin(x^2+y^2)\, dx\, dy.$

Q2. Evaluate $I = \int_0^7 \int_0^2 \int_0^{\sqrt{4-q^2}} \frac{q}{r+1}\, dp\, dq\, dr.$

Q3. Use cylindrical coordinates to evaluate $I = \int_0^1 \int_0^{\sqrt{1-y^2}} \int_{x^2+y^2}^{\sqrt{x^2+y^2}} xyz\, dz\, dx\, dy.$