King Fahd University of Petroleum & Minerals
Department of Mathematics and Statistics
(Semester 181) Math 201 Quiz # 6

Name: _____ I.D. # _____ Sr. # _____

1. Given the integral $\int_0^1 \int_0^{1-x} \int_0^{2-2z} dy\,dz\,dx$, write the limits on the equivalent integrals $\iiint dx\,dz\,dy$ and $\iiint dz\,dy\,dx$.
2. Use cylindrical coordinates to find the volume of the region that lies between $z = 24 - x^2 - y^2$ and $z = 2\sqrt{x^2 + y^2}$.
3. Evaluate $\iiint_E \sqrt{x^2 + y^2 + z^2}\, dv$, where E lies above $z = \sqrt{x^2 + y^2}$ and between $x^2 + y^2 + z^2 = 1$ and $x^2 + y^2 + z^2 = 4$.