Assignment-1 (cse 1st year) mathematics-2 (100025)

Q1. Find the values of constants a, b, c so that the Directional Derivative of

U=ax at (1,2, -1) has a maximum magnitude 64 in the direction parallel to z-axis.

Q2. Prove that the div. grad.

Q3. If F= 2yi-zj+xk, evaluate along the curve x=cos t, y= sin t, z= 2cos t from t=0 to t=

Q4. Verify Stoke's theorem for F= taken round the rectangle bounded by x= +a, x=-a, y=0, y=b.

Q5. Verify the Gauss's Divergence theorem and show that