Math 201-133 Quiz 3 (A)

Name:.....ID#:.....Sec:.....Ser:.....

Q.1: Find a line passing through $(1, 2, -3)$ and perpendicular to both $\overrightarrow{u} = 2\hat{i} - 3\hat{j} + \hat{k}$ and $\overrightarrow{w} = -\hat{i} + 2\hat{j} - 3\hat{k}$.

Q.2: Find equation of a plane passing through $(1, 2, -3)$ and perpendicular to the line

$$\frac{x-2}{3} = \frac{y+1}{2} = \frac{z+1}{-1}.$$

Q.3: Find distance of the point $S(1, 2, 3)$ from the line $x = 2 + 3t,\ y = 1 - t,\ z = 3 + 2t$.

Q.4: Find distance of the point $S(2, -1, 3)$ from the line plane $2x + 3y - z = 4$.

Q.5: Find line of intersection of the planes $x + y + z = 1$ and $x + 2y + 2z = 1$.