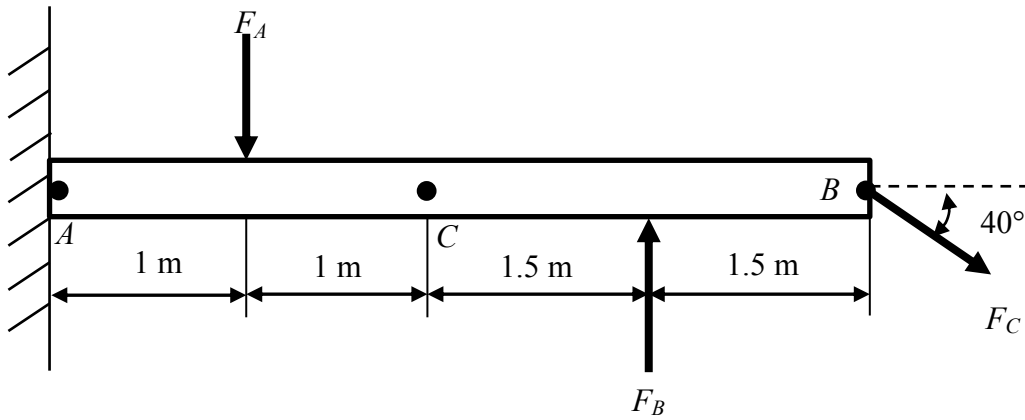3. Determine the distribution of the internal normal force, shear force, and moment at point C. $F_A \sim N(50, 2.5^2)$ N, $F_B \sim N(35, 2^2)$ N and $F_C \sim N(65, 2.5^2)$ N are normally distributed and independent with each other.

Answer: $N_C \sim N(38.3, 1.92^2)$ N, $V_C \sim N(56.78, 3.58^2)$ N and $M_C \sim N(22.84, 6.2^2)$ N·m (Anticlockwise)