Note: These are answers, not complete solutions.

1. \( \vec{v} = -63.9 \hat{i} \text{ m/s, } s = -0.422 \text{ m} \)

2. \( 1.924 \times 10^6 \text{ Pa} \)

3. \( 2.31 \text{ Hz} \)

4. \( 33.8 \text{ °C} \)

5. \( \vec{F} = (+2.77\hat{i} + 2.83\hat{j}) \times 10^{-6} \text{ N} \)

6. \( \alpha = 0.296 \text{ rad/s}^2 \quad (I = 10.13 \text{ kg m}^2, \tau = 3.00 \text{ Nm}) \)

7. \( 1.46 \text{ m} \)

8. \( R_Y = 1286 \text{ N, } T = 1734 \text{ N, } R_X = 1734 \text{ N} \)

Note: These are most easily found in the order asked in the test, by using forces up-down, torques CCW-CW, and forces right-left respectively.