Experiment 3

Supplementary procedure for solving questions.

Forced vortex:

Q.2 First, you have to calculate volume of fluid in cylinder undergoing angular motion,

Procedure to find volume:

1) You have to take differential volume and use surface profile equation and integrate them.

Second, now equate this volume to the initial volume before the rotation to get relation in terms of initial height.

Third, now you have to use one principle to get the answer! Assume the hole is very small in diameter compared to cylinder

Note here assume at t=0 cylinder is in steady state having rotation of .

Falling ball:

Q.1 you can do it.

Q.2 It is not mandatory. You can solve for fun if you have time.