ECOR 2606 Quiz #2 Practice

Two skydivers jump out of a stationary balloon. The first skydiver has a drag coefficient of 0.3 kg/m and a mass of 60kg. The second skydiver has a drag coefficient r of 0.2 kg/m and a mass m of 50 kg. The second one jumps 3s after the first one.

Write an m-file function that, given values for m1, r1, m2, and r2 and t computes and returns separation. Your function must be called *calcSep*. Your function may assume that *m1* is between 10kg and 200kg. Have it generate an error if the value of *m1* is not within these bounds

Produce a script file (quiz2.m) that

i) Uses function *calcSep* to create a plot (figure 1) of separation vs T for *t* from 0s to 30s.

ii) Outputs a table giving separation for *t* from 5s to 10s in steps of 0.5s.

Your function must include appropriate comments, your graph must be appropriately labelled, and your table must be nicely formatted. Express all times in seconds after the first jumper's departure from the balloon. All necessary formulas can be found in the Lecture 1 slides and the text.

Submit calcSep.m and quiz2.m.

Supplemental: What will the maximum separation be and at what time will it occur?