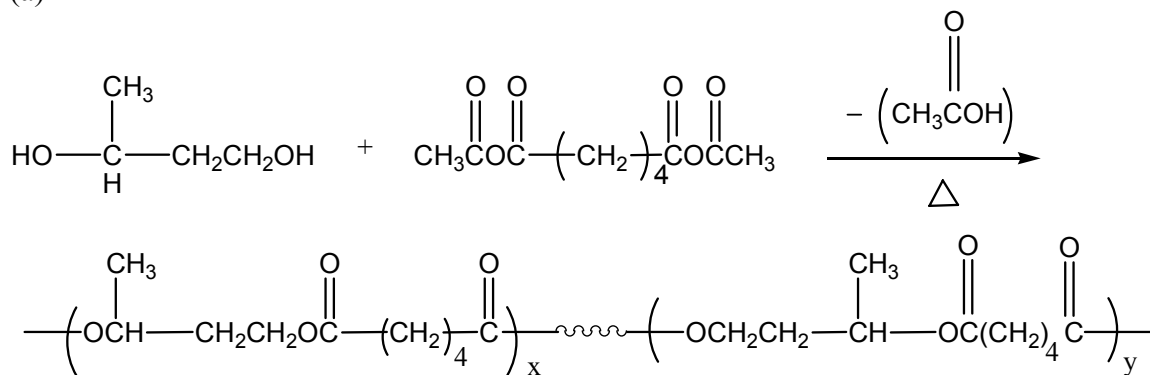


3.034 PSet#3 Solution

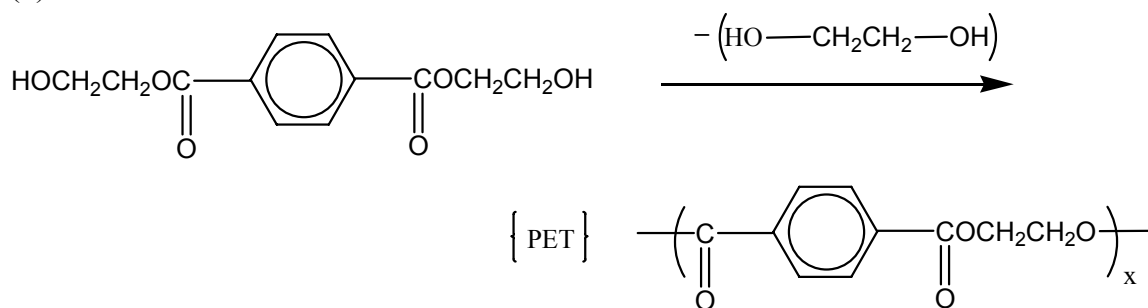
Question 1.

(a)

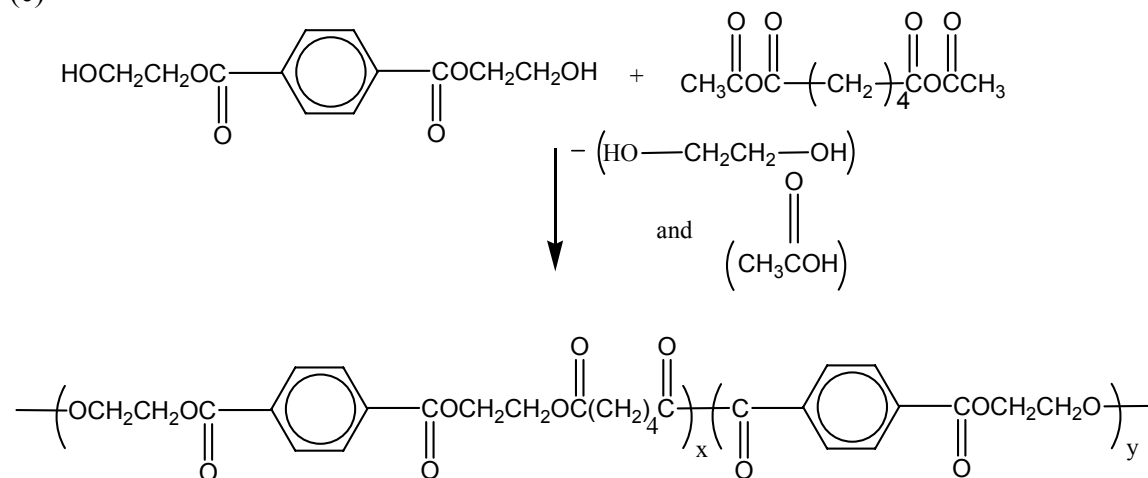


Random copolymer of head-to-head / head-to-tail positional isomers

(b)



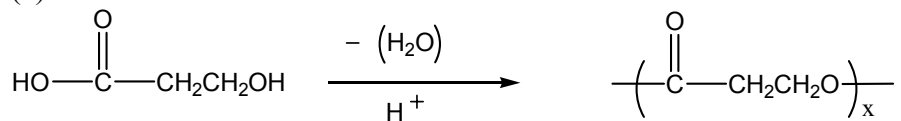
(c)



Random copolymers of both repeat units

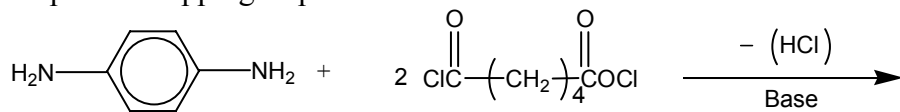
Question 2.

(a)

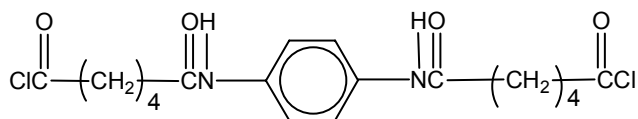


(b) Use a 2-step reaction

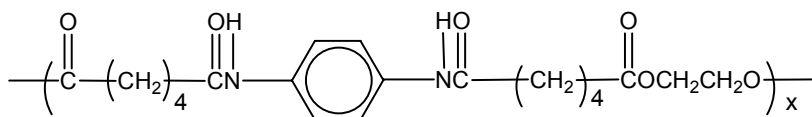
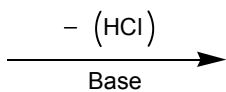
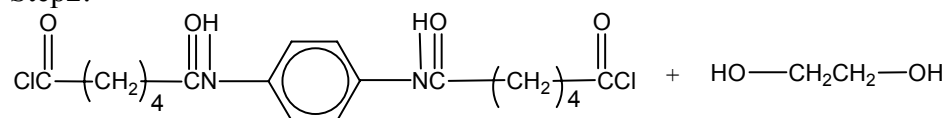
Step1: endcapping step



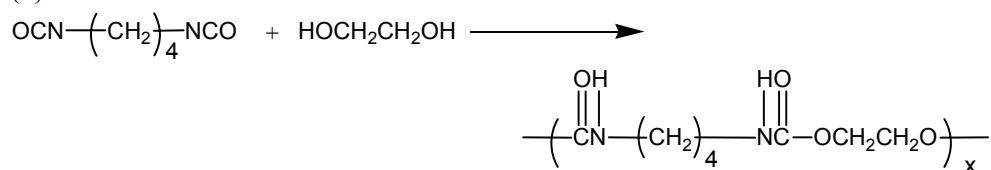
Note: must use acid chlorides with aromatic amine



Step2:



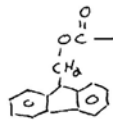
(c)



#3

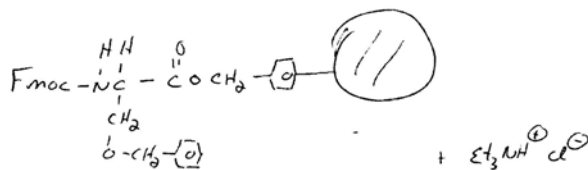
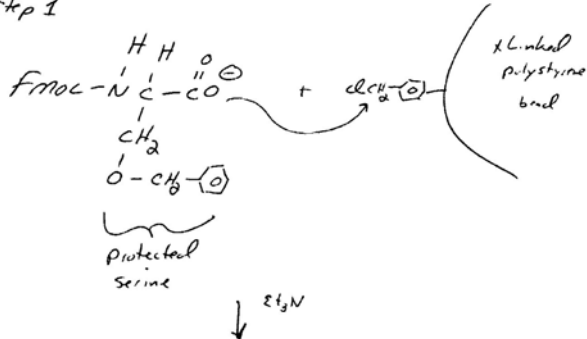
4

let Fmoc =



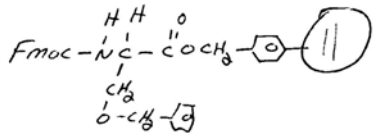
the first amino acid to be attached to the modified polystyrene support in a Merrifield reactor must be protected at the alcohol group (-CH₂OH)

step 1

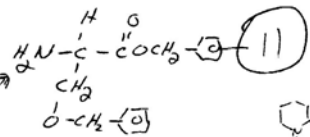
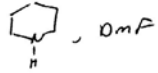


5

Step 2



[deprotect amine group]



Step 3 react activated amino acid #2 with -NH₂

