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Marks • Consider the following reaction sequences beginning with the secondary alcohol, G. ОН H $\frac{\text{K}_2\text{Cr}_2\text{O}_7 / \text{H}^{\oplus}}{\text{(Step iii)}}$ conc. H_2SO_4 / heat (Step i) \mathbf{G} CH_3MgBr (Step iv) H_2 , Pd/C K OH (Step ii) + conc. H₂SO₄ / heat L (Step v) + M Suggest structures for compounds $\mathbf{H} - \mathbf{M}$ in the reaction sequences above. \mathbf{H} I J K L M What approximate ratio **H** : **I** do you expect? Why? What type of reaction is occurring in Step i?

THIS QUESTION CONTINUES ON THE NEXT PAGE.

What type of reaction is occurring in Step ii?

What type of reaction is occurring in Step iii?

What type of reaction is occurring in Step iv?