

1. Please write down the cell types present after conjugation between cells with different F factors. (60 points)

a.  $F^+ \times F^-$

b.  $Hfr \times F^-$

c.  $F' \times F^-$

2. The following pedigree represents the inheritance of a rare disorder in an extended family. What is the most likely mode of inheritance for this disease? Please state your arguments explicitly. (40 points)

