

4. Define and explain the following terms giving suitable examples:

Genotype

Phenotype

Second cousins once removed (use a pedigree chart to illustrate your answer)

5. Differentiate prokaryotes from eucaryotes on the following:

Form:

Each cell size (in diameter and volume):

Nitrogen fixing:

6. Differentiate maternal effects from plasmogenes

7. Show, using a branching diagram, proportions of different gametes expected to be produced by an individual of a genotype: AaBbCcDDEe

8. Explain why the genetic code is considered nearly universal

SECTION B: ESSAY QUESTIONS (TOTAL 30 MARKS)

Write an essay on:

1. Human aneuploidy disease conditions.
 2. Particulate theory of inheritance Mendel proposed
 3. Parental disputes and pedigree confirmation
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