



10. Pureline breed refers to:
- a. Heterozygosity only
  - b. Homozygosity only
  - c. Homozygosity and self-assortment
  - d. Heterozygosity and linkage
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( Descriptive )

Time : 1 hr. 15 mins.

Marks : 25

[ Answer question no.1 & any two (2) from the rest ]

1. Describe the procedure for dominant backcross gene transfer. 5
2. What is gene interaction? Explain epistasis and complementary genes with Punnett diagrams. 2+4+4=10
3. Briefly describe the modified Ear to Row method for crop improvement. 10
4. Write short notes on: 5+5=10
  - a) Hybrid varieties
  - b) Synthetic varieties
5. What is extra nuclear inheritance? Explain extra nuclear inheritance of *kappa* particles in *Paramecium* with significant drawings. 3+7=10

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