

**2020**

**ENVIRONMENTAL SCIENCE – HONOURS - PRACTICAL**

**Paper: CC-12-P**

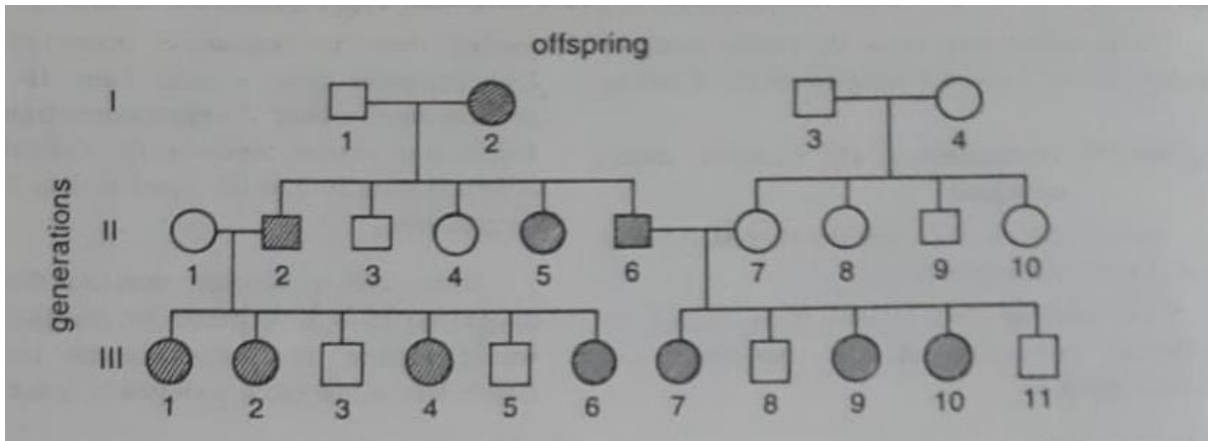
**Full marks: 30**

*The figures in the margin indicate full marks*

1. (a) Describe the following pedigree as provided and write inference. (10)
- (b) Solve the following numerical problem on population genetics. (10)
  
2. Write the materials and methodology for estimation of protein using BSA and inference. (4+5+1)

**\*\*Answer scripts to be mailed in email id: [ugpractexam2021@gmail.com](mailto:ugpractexam2021@gmail.com)**

1. (a) In the given pedigree, the shaded symbols represents phenotypes of a certain disease in the family as affected individuals. Determine the mode of inheritance of the gene.



- (b) In a study of the Collard Kingfisher in Sundarban Biosphere Reserve, 11 are albino individuals in a total population of 2100. This kind of albinism is controlled by a single gene with two alleles: albinism is recessive to normal skin coloration. Calculate the expected allele frequencies and genotype frequencies if the population were in Hardy-Weinberg equilibrium.