



THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)

Re-accredited (2nd Cycle) by NAAC with Grade "A", CGPA – 3.46 on a 4-point scale

Backlog Arrear Examination, March 2021

BOT 341

Genetics and Evolution

Marks: 75

Date: 20.3.21

I. Answer any FIVE of the following questions each not exceeding 4 pages. (5X15=75)

1. Explain law of dominance, law of segregation and independent assortments and present the ratio in mono and dihybrid cross.
2. Explain how 9:3:3:1 ratio of a dihybrid cross is modified in interaction of genes?
3. Explain present the scheme of sex determination in insects, animals and human being.
4. Differentiate sex linked inheritance from cytoplasmic inheritance.
5. What are multiple alleles? Explain it in the content of blood group inheritance & blood transfusion.
6. Enlist the type of experiments leading to recognition of DNA as genetic materials.
7. Find how endonuclease as vectors are used in gene manipulations.