011B - Biotechnology Paper-II (Genetics)

P. Pages : 1

Time : Three Hours

1724

GUG/S/23/11593

Max. Marks : 50

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1. Describe in detail law of segregation and independent assortment given by Mendel's. **10**

OR

    a) Explain law of dominance.

    b) Describe allelic interaction with example.

    c) Explain chromosomal theory of inheritance.

    d) What is co-dominance of ABO blood group?

2. Explain sex determination in animals. **10**

OR

    a) Give concept of sex-linkage.

    b) What is holiday junction? Explain.

    c) Explain molecular mechanism of crossing over.

    d) What is chiasmata formation?

3. Explain chromosomal aberration in plants. **10**

OR

    a) What is turner syndrome? explain.

    b) Write note on polyploidy and its significance.

    c) Give an account on Klinefelter's syndrome.

    d) What is structural abnormalities Explain.

4. Describe Hardy-Weinberg's principle with suitable examples. **10**

OR

    a) Explain genetic frequency.

    b) Explain sickle cell anemia.

    c) What is gene pool? Explain.

    d) Explain Y-linked male fertility.

5. Attempt **any ten.** **10**

    a) What is epistasis?

    b) Define homozygous.

    c) What is 9:3:3:1 ratio?

    d) What are Pseudoalleles?

    e) What is test cross?

    f) Who proposed the chromosomal theory of inheritance?

    g) What is duplication loop?

    h) Define karyotype

    i) Define the term genotype.

    j) Define supplementary genes.

    k) Give causes of Rett's syndrome.

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