(NO. OF PAGES: 2)

(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2020 ONLY)

20UBY509

REG.NO . :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS: DECEMBER-2022

COURSE NAME: B.Sc.-BOTANY **MAXIMUM MARKS: 70**

SEMESTER: I **TIME : 3 HOURS**

PART – III

GENETICS AND EVOLUTION

SECTION –A (10X1=10 Marks)

ANSWER ALL THE QUESTIONS.
MULTPLE CHOICE QUESTIONS. **K1**

1. In which generation, the recessive character will express ?
   a) F1 generation b) F2 generation onwards
   c) F1 and F2 generations d) F3 generation only
2. The allele which is unable to express its effect in the presence of another is called_____.
   a) Co Dominant b) Supplementary c) Complementary d) recessive allele
3. When does crossing over occur ?
   a) Pachytene b) Diplotene c) Diakinesis d) Zygotene
4. Which one of the following is not the part of Lac Operon?
   a) Repressor b) Promotor c) Operator d) active protein
5. Y-linked inheritance is also referred to as_____.
   a) Crisscross b) Straight c) Loop d) Jumping

ANSWER THE FOLLOWING IN ONE OR TWO SENTENCES. K2

6. Define Recessive gene.
7. What are Alleles?
8. Define meiosis.
9. Define Heredity.
10. What is point mutation?

SECTION- B (5X4=20 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. K3

11. a) Describe test cross with an example.

(OR)

b) Explain incomplete dominance.

12. a) Write about blood group in man.

(OR)

b) Assess the multiple alleles with an example.

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13. a) Describe cytoplasmic inheritance.

(OR)

b) Interpret sex determination in plants.

14. a) Describe Lac Operon concept.

(OR)

b) List the characteristics of genetic code.

15. a) Mention about mutation and list the causes of mutation.

(OR)

b) Explain polyploidy and its significance.

SECTION - C (4 X 10 = 40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS.
(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS .
(FROM Qn. No : 17 to 21) (K4 (Or) K5).

16. Analyze the law of dominance.

17. Enumerate Di-hybrid cross with neat checkerboard.

18. Justify interaction of genes with an example.

19. Describe Linkage and crossing over with neat diagram.

20. Give an account of Mc - Cleod and Mc Carty experiment.

21. Discuss the theories of Evolution.

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