B.Sc. I Semester Degree Examination, March/April - 2023
BIOTECHNOLOGY
Cell Biology And Genetics
(NEP)

Time : 2 Hours   Maximum Marks : 60

Note : (i)   Answer **All** the Sections.

(ii)   Draw diagrams wherever necessary.

SECTION - A

Answer the following sub-question.   **10x1=10**

1.   (a)   What are Peroxisomes ?

(b)   Who discovered Nucleus ?

(c)   Define Synapsis.

(d)   What is the function of Telomere ?

(e)   What do you mean by Back Cross ?

(f)   Define Incomplete dominance.

(g)   What is Repulsion hypothesis ?

(h)   Name any two Chemical Mutagens.

(i)   What is Klinefelter's Syndrome ?

(j)   Define Polyploidy.

SECTION - B

Answer **any four** of the following question.   **4x5=20**

2.   Write the differences between plant cell and animal cell.

3.   Explain the UltraStructure of the Nucleosome model.

4.   Define Supplementary factors. Explain by taking Comb pattern in fowls.

5. Write a short notes on the role of microbes for Economic benefit of Human beings.

6. Give an account of the Chromosomal mechanism of Sex determination in man. How does it differ from the Avian type of Sex determination.

7. Explain the causes and symptoms of Turner's Syndrome.

SECTION - C

Answer **any three** of the following question. **3x10=30**

8. Explain the types of Lysosomes. Add a note on its functions.

9. Briefly explain the Prophase I of 1st Meiotic division with the help of suitable diagram.

10. Give the detailed account of the Chromosomal theory of Linkage with suitable examples.

11. What is chromosomal aberrations ? Write an account of the variations in Chromosomal Number.

12. Answer the following.
   (a) Kappa Particles in Paramecium.
   (b) Mendialian 1st Law with example.

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