



RAN - 1903001102030002

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B. Sc. Biotechnology (Sem. - II) Examination April - 2023

BT-04 : Fundamentals of Genetics

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

- (1) નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book
- Name of the Examination:
☛ **B. Sc. Biotechnology (Sem. - II)**
- Name of the Subject :
☛ **BT-04 : Fundamentals of Genetics**
- Subject Code No.: **1903001102030002**

Seat No.:

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Student's Signature

- Q. 1. Define Any Four: 8**
- (a) Sex linked genes.
(b) Different types of banding in chromosomes.
(c) Ribonucleotide and 5 - monophosphate nucleoside.
(d) Semi conservative replication of DNA.
(e) Genes and Genetics.
- Q. 2. Attempt Any Two: 14**
- (a) Describe Mendelian laws.
(b) Discuss the significance of Gene linkage with example.
(c) Explain chromosomal theory of inheritance.
- Q. 3. Attempt Any Two: 14**
- (a) What is replication? Explain in detail semi-conservative replication of DNA.
(b) Explain Meselson and Stahl experiment and conclude its result.
(c) Draw structure of t-RNA and give its role in genetics.

Q. 4. Attempt Any Two:

14

- (a) Write a note on Lampbrush chromosome.
 - (b) What was Chargoff's conclusion and how did it help in resolving structure of DNA.
 - (c) Discuss the possibilities of partial and complete digestion of Euchromatin by endonuclease.
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