



**DPP-1671**

**B. Sc. (Biotechnology) (Sem. II) Examination**

**April / May - 2016**

**BT-04 : Fundamentals of Genetics**

Time : 2 Hours]

[Total Marks : 50

**Instruction :**

नीचे दृष्टावेक निशानीवाणी विगतो उत्तरवडी पर अवश्य कभवी.  
Fillup strictly the details of signs on your answer book.

Name of the Examination :  
B. Sc. (BIOTECHNOLOGY) (SEM. 2)

Name of the Subject :  
BT-04 : FUNDAMENTALS OF GENETICS

Subject Code No. : 1 6 7 1 Section No. (1, 2,.....) : Nil

Seat No. :

Student's Signature

- 1 Define any four : 8
- (a) Sex linked genes.  
(b) Enlist the different types of banding in chromosomes.  
(c) Define: Ribonucleotide and 5' – monophosphate nucleoside.  
(d) Transfection.  
(e) List the different bonds occurring in DNA.
- 2 Attempt any two : 14
- (a) Describe Mendelian laws.  
(b) Discuss the significance of Gene linkage with example.  
(c) Explain chromosomal theory of inheritance.
- 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.

4 Attempt any **two** :

14

- (a) Write a note on Lampbrush chromosome.
  - (b) What was Chargaff'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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