



R-3813-14

**M. Sc. (Sem. IV) (Integrated Biotechnology)
Examination**

May / June – 2010

**IBT-403 : Genetics
(New Course)**

Time : 3 Hours]

[Total Marks : 70

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Instructions :

(1)

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

Name of the Examination :
M. Sc. (Sem. 4) (Integrated Biotechnology)

Name of the Subject :
IBT-403 : Genetics (New)

Subject Code No. : **3 8 1 3** Section No. (1, 2,.....) : **1**

Seat No. :

Student's Signature

- (2) Figures to the right indicate full marks of the question.
(3) Draw neat and labeled diagrams wherever necessary.
(4) Both sections must be written in **separate** answer books.
- 1 Attempt the following : 5
(1) What are intragenic and intergenic interactions ?
(2) Who proposed one gene enzyme hypothesis ?
(3) State differences between eutherics and euphenics.
(4) What is incomplete dominance ? Give an example.
(5) What is transversion ?
- 2 What is mutation ? Explain and describe its types. 10
OR
- 2 Describe Mendal's laws. 10
- 3 Explain : 5
(a) Generalized transduction 5
(b) Bacterial Conjugation. 5
OR
- 3 Comment on recombination, describe the various models. 10
- 4 Short notes : (any two) 10
(a) Transformation
(b) Epistasis
(c) Genetics variation.

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[Contd...

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Instructions :

(1)

नीचे दशावलि निशानीवाणी विगतो उत्तरवडी पर अवश्य लभवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
<input type="text" value="M. Sc. (Sem. 4) (Integrated Biotechnology)"/>	<input type="text" value="Student's Signature"/>
Name of the Subject :	
<input type="text" value="IBT-403 : Genetics (New)"/>	
Subject Code No. : <input type="text" value="3"/> <input type="text" value="8"/> <input type="text" value="1"/> <input type="text" value="4"/>	Section No. (1, 2,.....) : <input type="text" value="2"/>

- (2) Figures to the right indicate full marks of the question.
(3) Draw neat and labeled diagrams wherever necessary.
(4) Both sections must be written in **separate** answer books.

5 Attempt the following : 5

- (1) What is capping ?
- (2) Define spliceosome.
- (3) What is degeneracy of genetic code ?
- (4) What are 'A' and 'P' sites ?
- (5) What is protein sorting ?

6 Describe at length transcription in eukaryotes. 10

OR

6 Explain the mechanism of DNA replication. 10

7 Compare and contrast translation in prokaryotes and eukaryotes. 10

OR

7 Explain :

- (a) 'Arabinose Operon' 5
- (b) Why allolactose is inducer rather than lactose ? 5

8 Short notes on any **two** : 10

- (a) t-RNA
- (b) Splicing and its signification
- (c) Attenuation.