**SECTION – C** (2 × 20 = 40)

*Answer ALL questions.*
*Each answer should not exceed 1,200 words.*
*All questions carry equal marks.*

15. (a) Bio-chemistry of Eukaryotic nucleic acids.

(OR)

(b) Write about linkage and crossing over.

16. (a) Interaction of genes and their types.

(OR)

(b) Write an essay on cytology in relation to taxonomy.

Register Number :

Name of the Candidate :

**1 7 1 8**

# M.Sc. DEGREE EXAMINATION, 2008

**( BOTANY )**

( SECOND YEAR )

( PAPER - VIII )

## 220. CELL BIOLOGY, GENETICS AND PLANT BREEDING, EVOLUTIONARY BIOLOGY AND BIOMETRY

*( Revised Regulations )*

*( Including Lateral Entry )*

May ] [ Time : 3 Hours

Maximum : 100 Marks

*Answer sections A, B and C.*
*Draw diagrams wherever necessary.*

**SECTION – A** (8 × 3 = 24)

*Answer ALL questions.*
*Each answer should not exceed 50 words.*
*All questions carry equal marks.*

*Write short notes on the following :*

1. Autopolyploids.
2. Karyokinesis.
3. Histone.
4. Fram shift mutation.
5. Multiple alleles.
6. Apomixis.
7. Prebiotic environment.
8. Mean.

**SECTION – B** (6 × 6 = 36)

*Answer ALL questions.*
*Each answer should not exceed 300 words.*
*All questions carry equal marks.*

9. (a) Role of polyploids in evolution.

(OR)

(b) Write about Karyotype analysis.

10. (a) Chromosome theory of heredity.

(OR)



(b) Describe crossing over.

11. (a) Floral biology and its significance in plant breeding.

(OR)

(b) Write about breeding methods in self pollinated crops.

12. (a) Write about speciation.

(OR)

(b) Origin of life.

13. (a) Write about synaptineal complex.

(OR)

(b) Selection principles.

14. (a) Write about graphical representation of research data.

(OR)

(b) Write about median and its application in biology.

**Turn over**