

**PC-509**  
**M.Sc. ZOOLOGY (FOURTH SEMESTER)**  
**Examination- JUNE-2020**  
Compulsory/Optional  
Group -B  
Paper-III  
**CELL BIOLOGY**

**Time:- Three Hours ]**

**[Maximum Marks:80**

नोट : दोनो खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित है।

Note: Answer from Both the Section as Directed. The Figures in the right-hand margin indicated marks.

**Section-A**

1. **Answer the following questions:**

**5x4**

(a) Structure of nucleosomes.

OR

Explain DNA methylation.

(b) Comment upon structural organisation of eukaryotic genes.

OR

Discuss Zinc fingers.

(c) Give molecular basis of DNA rearrangements

OR

Explain amplification during development.

(d) Discuss gastrulation origin of Anterior-Posterior (Maternal effect genes and segmental genes)

OR

Give an account of homeotic selector genes.

**Section B**

**Answer any four of the following question:**

**15x4**

2. Give an account of molecular organisation of eukaryotic chromosome.

3. Describe structural and functional significance of polytene chromosomes .

4. Discuss transcription of gene in eukaryotes.

5. Give an account of mobile genetic elements in eukaryotes.

6. Discuss development of Drosophila and explain drosventral polarity.

7. Give an account of environmental modulation of gene activity.