

**Kishore Bharati Bhagini Nivedita College (Co-Ed.)**  
(Affiliated to the University of Calcutta)

**2020**

**ZOOLOGY – HONOURS**  
(1+1+1 2009 Regulations)

**First Paper (Unit-II)**

**Full Marks : 50**

**Time : 2 Hrs.**

*The figures in the margin indicates full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

Send PDF of the Answer Script to **kbbnczoology@gmail.com**

Answer **question no. 1** and **any three** questions from the rest.

1. Write short notes on **any four** from the following: 5×4
  - a) Kappa particle in *Paramecium* sp.
  - b) Chromosomal Aberration: Duplication
  - c) Chargaff's rule
  - d) Light Microscopy
  - e) Fluid mosaic model of membrane structure
  - f) c-value paradox
  - g) Mutation: Frame shift
  - h) Symbiont hypothesis of mitochondrial origin
  
2. Describe the fundamental basis of Human ABO blood group system. 10
3. Briefly describe the prokaryotic replication process. 10
4. Describe the role Y chromosome in Human sex determination and sexual character generation. 10
5. Describe different types of chromosomal aberration. 10
6. Write down on Sex determination in *Drosophila*. 10
7. Describe about Scanning EM (SEM) and Transmission EM (TEM). Write down their roles. 7+3