

D 52854

(Pages : 2)

Name.....

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)  
EXAMINATION, NOVEMBER 2023**

(CBCSS)

Zoology

ZOL 1C 02—BIOPHYSICS AND BIOSTATISTICS

(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

I. Answer any *four* of the following. Short Answer Type Questions. Weightage 2 :

- 1 Define Cataphoresis.
- 2 What is Osmotic Pressure ?
- 3 Define Echolocation.
- 4 List out the applications of NMR Spectroscopy.
- 5 What is the  $R_f$  value in chromatography ?
- 6 Give any *four* characteristics of statistics.
- 7 Define Chi-square test.

(4 × 2 = 8 weightage)

II. Answer any *four* of the following. Short Essay Type Questions. Weightage : 3 :

- 8 List out the applications of Henderson Hasselbach equation.
- 9 Give a brief note on physical organization of ear.
- 10 Give a brief account on the principle of UV / visible spectroscopy.
- 11 Give a brief account on working of Patch clamp technique.
- 12 Explain the steps involved in sample fixation in SEM.
- 13 Give a brief account on importance of statistics.
- 14 Briefly explain the four laws of probability.

(4 × 3 = 12 weightage)

Turn over

III. Answer any *two* of the following. Long Essay Type Questions. Weightage 5 :

- 15 Describe in detail about the sources of ionizing radiation.
- 16 Describe in detail about the construction, principle and working of GM Counter.
- 17 Describe in detail about the working principle and instrumentation HPLC.
- 18 Describe in detail about the types of sampling methods.

(2 × 5 = 10)