

**C 32352**

(Pages : 2)

Name.....

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2017**

(CUCSS)

Zoology

ZO 1CT 02—BIOPHYSICS AND BIostatISTICS

(2016 Admissions)

Time : Three Hours

Maximum : 36 Weightage

I. Answer all *fourteen* questions. Each question carries 1 weightage :

- 1 Electrosmosis.
- 2 Gibb's Donnan equilibrium.
- 3 Haemolysis.
- 4 Discrete and Continuous variables.
- 5 Probability.
- 6 Pitch perception.
- 7 Ecolocation.
- 8 Chi-square test.
- 9 Application of Liquid scintillation Counter.
- 10 Margalef Species Richness.
- 11 Circular Dichrosism.
- 12 Single neuron recording.
- 13 Effect of positive G force.
- 14 Quartile deviation.

(14 × 1 = 14 weightage)

II. Answer any *seven* questions. Each question carries 2 weightage :

- 15 X-ray diffraction Crystallography.
- 16 Scanning Electron Microscopy.
- 17 Explain sampling methods.
- 18 Principle of Electrophoresis.

**Turn over**

- 19 Application of Nanotechnology in health care.
- 20 Difference between regression and correlation analysis.
- 21 Physical aspects of sound transmission in the ear.
- 22 Biological application of Radioisotopes.
- 23 Principle of ANOVA test and its significance.
- 24 Write a note on collection, classification and tabulation of data.

(7 × 2 = 14 weightage)

III. Answer any *two* questions. Each question carries 4 weightage :

- 25 Discuss on the properties of electromagnetic radiation. Add a notes on UV/VIS spectroscopy
- 26 Discuss on Laser and its applications in Biology.
- 27 Give an account on the Principle of Chromatography. Discuss its application in the Biological field.
- 28 (a) Calculate the coefficient of correlation for the following ages of grooms and brides. Interpret your result.

Groom	:	23	27	28	29	30	31	33	36	38	40
Bride	:	18	23	23	24	25	26	30	31	33	35

- (b) Write a note on Skewness and Kurtosis.

(2 × 4 = 8 weightage)