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(Pages : 2)

Name.....

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2018

(CUCSS-PG)

Zoology

Z 01 CT 02—BIOPHYSICS AND BIostatISTICS

[2016 Syllabus Year]

Time : Three Hours

Maximum Weightage : 36

I. Answer all *fourteen* questions :

- 1 Diffusion coefficient.
- 2 Isoelectric focusing.
- 3 Frequency Curve.
- 4 Resolving power.
- 5 MRI.
- 6 Discrete and Continuous variables.
- 7 EGG.
- 8 Fixatives for electron microscopy.
- 9 G force.
- 10 Henderson Hasselbalch Equation.
- 11 Chi-square test.
- 12 Infrasonic sound.
- 13 Margalef Species Richness.
- 14 Sorenson index.

(14 × 1 = 14 weightage)

II. Answer any *seven* questions :

- 15 Fluorescence microscopy-Application in the biological field.
- 16 Explain the principle of ANOVA test. Give its significance.
- 17 Discuss on the biological importance of colloids.
- 18 Write a note on collection, classification and tabulation of data.

Turn over

- 19 Explain Kruskal-Wallis and Mann-Whitney test.
- 20 Give an account on the principle and application GM counter.
- 21 What is meant by regression equation ? Give its applications.
- 22 Discuss on Autoradiography.
- 23 Comment on the applications of GAS chromatography.
- 24 Nanotechnology-Application in the field of health care.

(7 × 2 = 14 weightage)

III Answer any *two* questions :

- 25 Describe the physical aspects of sound transmission in the ear.
- 26 Discuss on the biological effects of ionization radiation.
- 27 (a) Given below is respiratory rate of 10 individuals. Calculate the standard deviation.
22,22,20,24,16,17,18,19,20,21.
(b) Write a note on regression coefficient.
- 28 Describe X-ray diffraction crystallography and its application in the determination of protein structure.

(2 × 4 = 8 weightage)