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(Pages : 2)

Name.....

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)  
EXAMINATION, NOVEMBER 2025**

(CBCSS)

Zoology

ZOL 1C 02—BIOPHYSICS AND BIostatISTICS

(2019 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

I. Answer any *four* questions. Each question carries 2 weightage :

- 1 Resonance theory of Helmholtz.
- 2 Dissociation of a weak acid.
- 3 Autoradiography.
- 4 Lesion stimulation of brain.
- 5 X ray diffraction.
- 6 Skewness.
- 7 Bray-Curtis similarity index.

(4 × 2 = 8 weightage)

II. Answer any *four* questions. Each question carries 3 weightage :

- 8 Physical basis of hearing.
- 9 Hemolysis.
- 10 Biological applications of radioisotopes.
- 11 PAGE.
- 12 Effect of negative G.
- 13 Advantages of sampling method over census.
- 14 Correlation analysis.

(4 × 3 = 12 weightage)

**Turn over**

III. Answer any *two* questions. Each question carries 5 weightage :

- 15 Explain the electrical and optical properties of colloids. Add a note on its biological importance.
- 16 Write an essay on laser and its application in biology.
- 17 Calculate the regression co-efficient from the following data on the number of branches and number of fruit clusters :

No. of branches	:	6	7	8	9	10	11	12	13	14	15
No. of clusters	:	13	14	15	17	16	20	19	18	21	22

- 18 A) What is standard deviation ? Discuss on the merits and demerits of standard deviation.
- B) Calculate the arithmetic mean and standard deviation of the following frequency distribution :

Variable	:	15	10	5	20	25	30	40	45	50	60
Frequency	:	6	4	2	6	10	10	10	6	4	2

(2 × 5 = 10 weightage)