

AE-778

M.Sc. (Previous)
Term End Examination, 2016-17

ZOOLOGY

Paper - II

Quantitative Biology and Environmental
Physiology

Time : Three Hours] [Maximum Marks : 100
[Minimum Pass Marks : 36

Note : Answer any **four** questions. The figures in the right-hand margin indicate marks. Illustrate your answer with suitable diagram. Statistical table can be provided on demand.

Unit-I

1. (a) Write about 'Analysis of Variance'. 15
(b) Haemoglobin content in gm / 100 ml of 10 persons of a locality was recorded as :
7, 8, 9, 10, 11, 12, 13, 14, 15 and 15.5.
Find out the variance of the data. 10

OR

275_BSP_(3)

(Turn Over)

(2)

(a) What do you mean by Regression Analysis ? 15

(b) Draw a graphical presentation of Regression Line of the following data : The body length (X-axis) and length of snout to dorsal fin (Y-axis) of 7 groups of fish of a species is given : 10

Body Length (X)	Length of Snout to dorsal fin (Y)
13.4	8.9
15.1	10.0
15.3	10.1
16.8	11.1
17.5	11.6
19.2	12.6
21.2	14.0

Unit-II

2. Write about Mathematical Modelling. 25

OR

Describe the cycling of nutrients in aquatic ecosystem.

(3)

Unit-III

3. Describe the mechanism of Adaptation. 25

OR

Describe the physiological adaptation of fresh water animals.

Unit-IV

4. Write about Acclimation and Acclimatization and oxygen deficient stress. 25

OR

Describe the physiological mechanism of Regulation of body temperature.