

[4]

Or

(a) Write the definition of median and mode with their respective formula. 6

(b) Explain the difference between the bar diagram and Histogram. 6

4. In ANOVA explain the following points :

(a) Factor, levels and formula of F-ratio.

(b) Explain total variability (SS_{total}) in one way and two way ANOVA only by ray diagram. (description is not required)

Or

Find the 'a' and 'b' constant in regression analysis from given data :

No. of fishes	Air gulping activity
6	13
7	14
8	15
9	17
10	16
11	20
12	19
13	18
14	21
15	22

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Roll No.....

I Semester Examination, April-2021

M.Sc.

ZOOLOGY

Paper III

[Quantitative Biology (Computer and Biostatistics)]

Time : 3 Hours]

[Maximum Marks : 80

Note : All questions are compulsory. Question Paper comprises of 3 sections. **Section A** is objective type/Multiple Choice questions with no internal choice. **Section B** is short answer type with internal choice. **Section C** is long answer type with internal choice.

SECTION 'A'

(Objective Choice Questions)

Choose the correct answer :

1 × 8 = 8

1. The brain of computer is :

- (a) ALU (b) CPU
(c) Memory (d) Control unit

2. What is ALU :

- (a) Array logic unit (b) Application logic unit
(c) Arithmetic logic unit
(d) None of the above

3. Which one is correct formate of e-mail address :

- (a) name.website.com (b) name@website.info
(c) name@website@.info
(d) None of the above

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4. HTML is used to create :
- (a) Web server (b) Web page
(c) high level program (d) machine language program
5. The body weight of fish in grams as follows :
15, 10, 20, 25, 12. What is the arithmetic mean ?
- (a) 16.1 (b) 16.4
(c) 17.0 (d) 16.2
6. What is dispersion (deviation) :
- (a) $d = \bar{X} - x$ (b) $d = \bar{X} - a$
(c) $d = a - b$ (d) All of the above
7. The symbol χ is stand for :
- (a) F-test (b) t -test
(c) Chi-square test (d) All of the above
8. When $r = 0$, it means :
- (a) zero correlation (b) positive correlation
(c) negative correlation (d) none of the above

SECTION 'B'

6 × 4 = 24

(Short Answer Type Questions)

Note : Answer the following questions in 250 words.

1. Describe the structure of computer in brief.

Or

Write in brief the history of computers.

2. What is Plagiarism. Describe it in brief.

Or

Write the importance of MS Power Point.

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3. Explain the Pie diagram with suitable example.

Or

Draw only a ray diagram to explain how we calculate the simple arithmetic mean in different series, also write the formulae.

4. Explain the type I and type II error in test of hypothesis.

Or

Explain the positive and negative correlation.

SECTION 'C'

12 × 4 = 48

(Long Answer Type Questions)

Note : Answer the following questions in 500 words.

1. Describe the following input devices with well labelled diagram :

(a) Mouse and Joy stick

(b) Keyboard

(c) Scanner

(d) Microphone and Optical Character Reader (OCR)

Or

Explain the binary number system.

2. Describe MS Excel in detail.

Or

Write an essay on Internet.

3. Find out the arithmetic mean by direct method from given data :

Marks obtained by students:

84, 75, 72, 82, 80, 78, 74, 86, 85 and 70

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P.T.O.