

Roll No. ....

**E-535****M. Sc. (Second Semester)****EXAMINATION, May-June, 2021**

ZOOLOGY

Paper Third

**(Quantitative Biology and Computer Application)***Time : Three Hours ]**[ Maximum Marks : 80***Note :** Attempt all Sections as directed.**Section—A**

1 each

**(Objective/Multiple Choice Questions)****Note :** Attempt all questions.

Choose the correct answer :

1. Standard for MODEM is drawn up by the following organization :
  - (a) Hayes
  - (b) AT and T
  - (c) BELL
  - (d) CCITT

2. The following topology has highest reliability :
  - (a) Bus
  - (b) Mesh
  - (c) Star
  - (d) Ring
3. The output of a lexical analyzer is :
  - (a) Machine code
  - (b) A parse tree
  - (c) Intermediate code
  - (d) A stream of tokens
4. Which of these are software ?
  - (a) Scanner
  - (b) Track ball
  - (c) Internet Explorer
  - (d) Keyboard
5. What operating system do we use in the computer lab ?
  - (a) Linux
  - (b) Microsoft window
  - (c) Apple OSX
  - (d) Both (a) and (b)
6. The following has highest access time :
  - (a) Swapping devices
  - (b) Magnetic disk
  - (c) Cache
  - (d) Floppy disk

**P. T. O.**

7. The following is the unstable sorting method :
- (a) Heap sort
  - (b) Bubble sort
  - (c) Insertion sort
  - (d) Merge sort
8. In which view Headers and Footers are visible ?
- (a) Draft view
  - (b) Normal view
  - (c) Print layout view
  - (d) Page layout view
9. Text-styling feature of MS Word is :
- (a) Word Fill
  - (b) Word Art
  - (c) Word Font
  - (d) Word Color
10. To apply center alignment to a paragraph you can press :
- (a) Ctrl + C
  - (b) Ctrl + C + A
  - (c) Ctrl + E
  - (d) Ctrl + S
11. Mean is also known as :
- (a) Range
  - (b) Average
  - (c) Mode
  - (d) Median

12. Which is positional central tendency ?
- (a) Arithmetic mean
  - (b) Geometric mean
  - (c) Mode
  - (d) Median
13. The value of correlation coefficient will vary from :
- (a) - 1 to 0
  - (b) 0 to 1
  - (c) - 1 to + 1
  - (d)  $-\infty$  to  $-\infty$
14.  $r = 0$  indicates :
- (a) no correlation between variables
  - (b) a negative correlation between variables
  - (c) a positive correlation between variables
  - (d) All of the above
15. In regression analysis independent variable is also known is :
- (a) Predictor
  - (b) Regressor
  - (c) Explanatory variable
  - (d) All of the above
16. Which is true for probability of an event P (E) ?
- (a)  $0 \leq P(E) \leq 1$
  - (b)  $0 < P(E) \leq 1$
  - (c)  $0 \leq P(E) < 1$
  - (d)  $0 < P(E) < 1$

17. Which is NOT non-probability sampling technique ?

- (a) Purposive sampling
- (b) Chister random sampling
- (c) Quota sampling
- (d) Snowball sampling

18. Gaussian distribution is known as :

- (a) Random distribution
- (b) Normal distribution
- (c) Binomial distribution
- (d) Poisson distribution

19. The square of standard deviation is called :

- (a) Quartile deviation
- (b) Range
- (c) Mean absolute deviation
- (d) Variance

20. 'Chi square' is zero when :

- (a) Excepted frequency is double that of the observed frequency.
- (b) Excepted frequency is lesser than the observed frequency.
- (c) Excepted frequency is equal to the observed frequency.
- (d) Excepted frequency is greater than the observed frequency.

#### Section—B

2 each

#### (Very Short Answer Type Questions)

**Note :** Attempt all questions.

1. What is the function of MAR in computer ?

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2. What is a data bus ?

3. Give the specification of dot matrix printer ?

4. Write the name of components of CPU ?

5. What are the three descriptive statistics ?

6. What is Mid value ?

7. What is negative correlation ?

8. What is Goodness of fit ?

#### Section—C

3 each

#### (Short Answer Type Questions)

**Note :** Attempt all questions.

1. What is Cray-1 ?

2. What is Binary Number System ?

3. What is Auxiliary Storage System ? Write its types and importance in computer application.

4. What are the basics of MS office ?

5. What is mean deviation ? Give its merits and demerits.

6. What is regression ?

7. What is Null hypothesis ?

8. What is Chi square test ?

#### Section—D

5 each

#### (Long Answer Type Questions)

**Note :** Attempt all questions.

1. Give detailed account on input and output devices in computer system.

*Or*

Explain the hardware of a computer system.

2. Explain the MS Office of a computer system.

*Or*

Write an essay on computer application in biostatistics.

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3. In a village details of persons of different age groups affected by COVID-19 and their subsequent death rate are as follows :

| Age (year) | No. of Deaths |
|------------|---------------|
| 0—5        | 7             |
| 5—10       | 12            |
| 10—15      | 10            |
| 15—20      | 11            |
| 20—25      | 7             |
| 25—30      | 8             |
| 30—35      | 7             |
| 35—40      | 4             |
| 40—45      | 19            |
| 45—50      | 22            |
| 50—55      | 16            |
| 55—60      | 14            |
| 60—65      | 13            |
| 65—70      | 10            |
| 70—75      | 9             |
| 75—80      | 8             |

Calculate standard deviation from given data by direct method.

*Or*

What is Coefficient of correlation ? Describe their calculating methods.

4. What is Probability ? Explain binomial trials.

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*Or*

Draw a pie diagram of given data :

| S. No. | Interested Subjects | No. of Students |
|--------|---------------------|-----------------|
| 1.     | Zoology             | 50              |
| 2.     | Botany              | 65              |
| 3.     | Maths               | 35              |
| 4.     | English             | 25              |
| 5.     | Hindi               | 40              |
| 6.     | Chemistry           | 15              |

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