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Unit III

3. Explain process of creating new presentation and working with slides.

Or

What are the main features of statistical data analysis ? Explain.

Unit IV

4. Explain search engines in detail with example.

Or

Explain different parameters to determine impact factor of a research article or research journal.

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G-2/204/21

Roll No.....

M.Sc. II Semester Examination, 2021

BIOCHEMISTRY

Paper IV

(Biometry, Computer and Scientometry)

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 Type Questions)

Choose the correct answer :

8 × 1 = 8

1. Height of 7 students (in cm) is given below. If the mean of height of 7 students is 165, what is the value of x ?

168 170 x 160 162 164 162

(a) 170

(b) 165

(c) 160

(d) 169

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2. If $P(E) = 0.07$, then what is the probability of 'not E' ?

- (a) 0.93 (b) 0.95
(c) 0.89 (d) 0.90

3. If the assumed hypothesis is tested for rejection considering it to be true is called :

- (a) Null Hypothesis
(b) Statistical Hypothesis
(c) Simple Hypothesis
(d) Composite Hypothesis

4. Consider a set of 18 samples from a standard normal distribution. We square each sample and sum all the squares. The number of degrees of freedom for a Chi square distribution will be :

- (a) 17 (b) 18
(c) 19 (d) 20

5. Which of the following to justification align the text on both the sides—left and right of margin ?

- (a) Balanced (b) Right
(c) Justify (d) Balanced

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Number of surgery	f
10—12	5
13—15	14
16—18	19
19—21	12

Or

Find SD (Standard deviation) of the erythrocyte sedimentation rate (ESR), found to be 3, 4, 5, 4, 2, 4, 5 and 3, in 8 normal individuals.

Unit II

2. Attack rates among the vaccinated and unvaccinated against measles are given in the table given below. Prove the protective value of vaccination by χ^2 test.

Group		Result		
Vaccinated	(O)	10	90	100
	(E)	18	82	
Unvaccinated	(O)	26	74	100
	(E)	18	82	

Or

How can you calculate significance of difference between means of small samples by Student's t -test ? Explain method of calculation with example.

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P.T.O.

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6. Which of the following section does not exist in slide layout ?

- (a) Titles (b) Lists
(c) Charts (d) Animation

7. Search engines maintain heavy database of :

- (a) keywords (b) URLs
(c) web pages (d) All of these

8. Which one of the following is an indication of the quality of a research journal ?

- (a) Impact factor (b) H-index
(c) G-index (d) 110-index

SECTION 'B'
(Short Answer Type Questions)

6 × 4 = 24

Note : Answer all questions.

Write short notes on :

Unit I

1. Coefficient of variation.

Or

Basic laws of probability.

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Unit II

2. The 2×2 contingency table.

Or

Steps of calculation of t-test.

Unit III

3. Statistical data analysis through MS office.

Or

Generating charts/graph through MS office.

Unit IV

4. Scopus.

Or

Web of Science.

SECTION 'C'
(Long Answer Type Questions)

12 × 4 = 48

Note : Answer all the following questions.

Unit I

1. Table below gives the frequency distribution of the number of surgery made each day during the past 50 days at the hospital of a certain city. Calculate the variance and standard deviation.

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