Reg. No. ☐☐☐☐☐☐☐☐

G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI – 628 502.

UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2024.

(For those admitted in June 2021 and later)

PROGRAMME AND BRANCH: B.Sc., BOTANY

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
V	PART - III	CORE ELECTIVE	U21BO5E1A	BIOSTATISTICS, COMPUTER APPLICATION AND BIOINFORMATICS

Date & Session: 13.11.2024 / FN   **Time: 3 hours**   **Maximum: 75 Marks**

Course Outcome	Bloom's K-level	Q. No.	SECTION – A (10 X 1 = 10 Marks) Answer ALL Questions.
CO1	K1	1.	Branch of statistics that deals with testing of hypothesis is called. a) Descriptive b) Inferential c) Comparative d) Advanced
CO1	K2	2.	The sampling type that involves the largest sample size is. a) Systematic b) Stratified c) Cluster d) Purposive
CO2	K1	3.	Find out the mode value of 80, 112, 110, 115, 124, 130, 100, 90, 150 and 180. a) 80 b) 115 c) 130 d) No mode
CO2	K2	4.	_____ represents the middle value of the given set of data. a) Mean b) Median c) Mode d) Range
CO3	K1	5.	Standard deviation measures the _____ of a data distribution. a) Length b) Spread c) Breadth d) All the above
CO3	K2	6.	Chi square test is used for testing a. a) Sample b) Data c) Variable d) Hypothesis
CO4	K1	7.	Which of the following is the brain of the computer? a) CPU b) Memory c) Storage d) Control unit
CO4	K2	8.	The generation of computer which uses transistor is. a) First b) Second c) Third d) Fourth
CO5	K1	9.	_____ compares a protein query sequence against nucleotide sequence database translated in all reading frames. a) BLAST X b) T BLAST X c) T BLAST N d) BLAST Z
CO5	K2	10.	The search engine used in GenBank is. a) SRS b) Entrez c) FASTA d) PubMed
Course Outcome	Bloom's K-level	Q. No.	SECTION – B (5 X 5 = 25 Marks) Answer ALL Questions choosing either (a) or (b)
CO1	K3	11a.	Enlist the scope of biostatistics.

CO1	K3	11b.	**(OR)** Discuss the various methods of data collection.
CO2	K3	12a.	Consider the following weight (mg) of plant leaves among a random sample of neem tree: 64, 66, 77, 72, 80, 72, 78, 63, 68 and 79. Calculate the measures of central tendency. **(OR)**
CO2	K3	12b.	Find out the mean for the following data.

Class	0	1	2	3	4	5	6
Frequency	5	8	12	12	12	7	4

CO3	K4	13a.	Write short notes on measures of dispersion and their types. **(OR)**
CO3	K4	13b.	Comment on Student's t-test.
CO4	K4	14a.	Brief the generations of computer. **(OR)**
CO4	K4	14b.	Describe the elements used in Microsoft Word.
CO5	K5	15a.	Infer the various nucleic acid sequence databases. **(OR)**
CO5	K5	15b.	List out the applications of Bioinformatics.

Course Outcome	Bloom's K-level	Q. No.	**SECTION – C (5 X 8 = 40 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K3	16a.	Elaborate the various sampling methods studied by you. **(OR)**
CO1	K3	16b.	Organize the presentation of statistical data.
CO2	K4	17a.	Calculate median for the following continuous data.

Weight of fruits (gm)	0-5	5-10	10-15	15-20	20-25	25-30	30-35
Frequency	5	14	18	25	20	10	7

(OR)

CO2	K4	17b.	Compute mode for the following data.

Weight of fruits (gm)	0-5	5-10	10-15	15-20	20-25	25-30	30-35
Frequency	5	14	18	25	20	10	7

CO3	K4	18a.	Find out the standard deviation for the continuous series.

Length of leaves (cm)	3.25-3.55	3.55-3.85	3.85-4.15	4.15-4.45	4.45-4.75
Frequency	2	5	11	5	2

(OR)

CO3	K4	18b.	In a snapdragon flower, red colour (R) is incompletely dominant over white colour (r). The F_2 results of an experiment are as follows: Red = 60, Pink = 158 and White = 82. With the help of Chi-Square test, verify whether it obeys Mendelian ratio or not (Level of significance at 5% = 5.991).
CO4	K5	19a.	Explain the various components of computer. **(OR)**
CO4	K5	19b.	Describe the features used in MS PowerPoint.
CO5	K5	20a.	Discuss the methods of multiple sequence alignment.

			(OR)
CO5	K5	20b.	FASTA and BLAST are used in sequence analysis - Justify.