

D 103086

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Name.....

Reg. No.....

**FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2024**

Statistics

STA 4C 02—STATISTICAL TECHNIQUES FOR PSYCHOLOGY

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

Section A*All questions can be attended.**Each question carries 2 marks.**Overall Ceiling 20.*

1. State the null hypothesis and alternative hypothesis of two way Anova.
2. What is contingency table ?
3. What is Yates correction ?
4. When should the nonparametric methods be preferably used ?
5. How do you define an experimental unit ?
6. What do you understand by randomization in experimental design ?
7. What is the test statistics for Kruskal- Wallis test ?
8. Define ordinary Sign test.
9. What do you meant by pilot survey ?
10. What is the Wilcoxon signed rank test used for ?
11. What is meant by nominal scale ?
12. Define the term reliability.

(Ceiling 20 marks)

Turn over

Section B

*All questions can be attended.
Each question carries 5 marks.
Overall Ceiling 30.*

13. Define Critical difference. Explain in the context of one way classified data.
14. The following table gives the number of aircraft accidents that occurs during the various days of the week. Find whether the accidents are uniformly distributed over the week.

Days	:	Sun.	Mon.	Tues.	Wed.	Thus.	Fri.	Sat.
No. of accidents	:	14	16	8	12	11	9	14

(Given the values of Chi-square significant at 5, 6,7 df are respectively' 11.07, 12.59, 14.07 at the 5 % level of significance)

15. Explain the procedure of Kruskal Wallis test.
16. Derive the sign test, stating clearly the assumptions made.
17. What is meant by a factorial experiment ?
18. Explain the meaning of Analysis of variance and give its uses.
19. What are the important points to be made while preparing a good questionnaire ?

(Ceiling 30 marks)

Section C

*Answer any **one** question.
The question carries 10 marks.*

20. In a study of vitamin supplementation, 10 animals were randomly assigned to each of 3 treatment groups :

Control 1	Control 2	Control 3
5.09	4.23	4.73
4.41	5.45	5.23
3.73	4.27	4.05
4.14	4.59	3.59
5.00	4.68	4.91

Control 1	Control 2	Control 3
3.32	4.14	3.82
3.73	3.77	4.59
3.94	5.09	4.26
3.56	4.78	4.04
4.07	4.92	4.38

Are the mean significantly different ?

21. (a) Define the term scale of measurements. What are the different scales of measurements ?
Briefly explain each scale of measurements ?
- (b) Explain 2^3 factorial experiment.

(1 × 10 = 10 marks)