20U461   (Pages: 2)   Name: ....

Reg.No: ....

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2022

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19U STA4 C02 - STATISTICAL TECHNIQUES FOR PSYCHOLOGY

(Statistics - Complementary Course)

(2019 Admission onwards)

Time : 2.00 Hours   Maximum : 60 Marks

Credit : 3

Part A (Short answer questions)
Answer *all* questions. Each question carries 2 marks.

1. What is meant by critical difference?

2. State the advantages of non-parametric test.

3. When there are 8 cells in which the observed and expected frequencies are distributed and no parameters has been estimated, find the d.f of chi-square test of goodness of fit.

4. Define degrees of freedom.

5. What are the disadvantages of a sign test?

6. Write down the test statistic for two sample sign test.

7. How many runs are there in the data given below? AABABBAABABBBAB

8. Explain Kruskal- Wallis test.

9. What is the degrees of freedom for the total sum of squares of 2^2 factorial experiment.

10. For a factorial design, r=5, find the degrees of freedom of total sum of square and error sum of square.

11. What is standard score?

12. What is content validity?

(Ceiling: 20 Marks)

Part B (Short essay questions - Paragraph)
Answer *all* questions. Each question carries 5 marks.

13. A test was given to give students taken at random from the fifth class of three schools of a town. The individual scores are :
    School I   :   9   7   6   5   8
    School I   :   7   4   5   4   5
    School I   :   6   5   6   7   6
    Carry out the analysis of variance and state your conclusions.

14. Examine whether there is any relation between community and brillance.

	B1	B2	Total
A1	215	135	350
A2	325	175	500
A3	60	90	150

Total	600	400	1000

15. Explain Wilcoxen signed rank test.

16. Test the hypothesis that there is no difference in depression before and after CBT based on the data below using signed rank test.

Before	2	2	3	1	2	1	2	2	1	7	9	2	8	3	6	4
After	2	2	3	1	1	1	2	2	15	3	1	0	9	8	6	1

17. Explain the analysis of 2^3 design.

18. Write short note on different scales of measurement.

19. Write short note on different types of reliability.

(Ceiling: 30 Marks)

Part C (Essay questions)

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

20. The following represent the number of units of production per day turned out by 4 different workers using 5 different types of machines.

Machine Types

Worker	A	B	C	D	E
1	4	5	3	7	6
2	6	8	6	5	4
3	7	6	7	8	8
4	3	5	4	8	2

On the basis of this information, can it be concluded that
(a) the mean productivity is the same for different machines,
(b) the mean productivity is different with respect to different workers.

21. Explain the steps involved in the construction of a questionnaire.

(1 × 10 = 10 Marks)

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