

15U425

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Name: \_\_\_\_\_

Reg.No: \_\_\_\_\_

**FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2017**

(CUCBCSS - UG)

Psychology - Complementary Course

**CC15U PSY4 C02 - PSYCHOLOGICAL STATISTICS IV**

(2015 Admission)

Time: Three Hours

Maximum: 80 Marks

**PART A**

Answer all questions. 1 mark each

**A. Choose the correct answer**

1. Analysis of Variance is used for comparing .....  
a) Variances    b) Deviations    c) Single mean    d) Means
2. .... Values ranges from zero to infinity  
a) Range    b) Median    c) Mean    d) Chi - square
3. Reliability means .....  
a) Efficiency    b) Sufficiency    c) Consistency    d) None of these
4. Run test is a ..... test  
a) Non parametric    b) Parametric    c) Both A and B    d) None of these
5. 5. When assumptions are not possible ..... test is used  
a) Parametric    b) Hypothetical    c) Z- test    d) Non - parametric

**B. Fill in the blanks**

6. Krushkal - Wallis test is also known as \_\_\_\_\_.
7. ANOVA means \_\_\_\_\_.
8.  $\chi^2$  test for homogeneity is used to examine \_\_\_\_\_.
9. Test for randomness is \_\_\_\_\_.
10. Sign test is a \_\_\_\_\_ test.

(10 × 1 = 10 marks)

**PART B**

Answer all questions. 2 mark each

11. Explain about logistic regression.
12. What do you mean by validity and reliability of test?
13. Explain test for independence.
14. Define run.

(1)

Turn Over

15. Define Contingency table.
16. What are different scales of measurement?
17. Explain characteristics of  $\chi^2$  test.
18. Which kind of questions can be included in a questionnaire?
19. Explain one way Analysis of variance
20. Define reliability.

(10 × 2 = 20 marks)

### PART C

Answer any six paragraph questions. 5 marks each

21. Explain the assumptions of ANOVA.
22. Explain sign test in case of large sample tests.
23. What is Krushkal-Wallis test?
24. Define Non parametric test.
25. What are the merits and demerits of non parametric tests?
26. Complete the following ANOVA table and draw your conclusions:

Source	DF	SS	MSS	F
Treatment	2	12.5	.....	2.6
Error	.....	21.5	.....	
Total	11	.....		

27. From the following data on hair and eye colour, can it be said that there is a significant association between hair colour and eye colour.

Eye colour\Hair colour	Light	Brown
Light	32	13
Dark	14	21

28. Explain the concept of test of Independence of Attributes.

(6 × 5 = 30 marks)



## PART D

Answer any two questions. 10 marks each

29. In a genetic study of chromosome structures, 132 individuals are classified according to the type of structural chromosome aberration and carriers in their parents. The following counts are obtained

Types of Aberration	Carrier		Total
	One Parent	Neither Parent	
Presumably Innocuous	27	20	47
Substantially Unbalanced	36	49	85
Total	63	69	132

Test the null hypothesis that type of aberration is independent of parental carrier.

30. What you mean by non parametric tests. Assumptions of nonparametric tests. Explain the concept of Fisher's exact test?
31. The following table indicates that the change of blood cholesterol readings taken from 5 patients by consuming 3 types of medicines.

Patients\Medicine	I	II	III
I	158	190	138
II	159	177	137
III	138	172	160
IV	146	153	160
V	131	147	149

- a) Test whether the mean blood cholesterol is the same for the different medicines?  
 b) Test whether the 5 patients differ with respect to mean consumption?
32. Discuss the steps involved in the construction of questionnaire.

(2 × 10 = 20 marks)

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