C 62085   (Pages : 4)   Name.........................**54**

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FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2014

(U.G.—CCSS)

Complementary Course—Psychology

PS 4C 02—PSYCHOLOGICAL STATISTICS

Time : Three Hours   Maximum : 30 Weightage

I. Objective type questions. Answer *all* questions. Each question carries a weightage of ¼.

(A) Choose the correct answer :

1 ———— tests are used when assumptions are made.

    (a) Parametric.   (b) Non-Parametric.

    (c) Hypothetical.   (d) None of these.

2 Which is a frequency table where the sample is calculated according to *two* attributes, divided into two *or* more classes ?

    (a) Frequency Polygon.   (b) Contingency table.

    (c) Tabular Columns.   (d) Frequency distribution.

3 ———— value ranges from O to infinity.

    (a) Range.   (b) Median.

    (c) Mean.   (d) Chi-square.

4 The number of independent observations is stated as :

    (a) Raw score.   (b) Raw data.

    (c) Degree of freedom.   (d) Contingency value.

(B) Fill in the blanks :—

5 Mann-Whitney U-test is a ———— test.

    (a) Parametric.   (b) Non-Parametric.

    (c) Sampling.   (d) Chi-square.

Turn over

6 ——— is constructed by arranging collected data values in ascending order of magnitude with their corresponding frequencies.

    (a) ANOVA Table.   (b) Frequency table.

    (c) Graph.   (d) Regression chart.

7 ——— is generally called as the science of counting.

    (a) Mathematics.   (b) Algebra.

    (c) Geometry.   (d) Statistics.

8 Friedman test is a ——— non-parametric analysis of variance.

    (a) One-way.   (b) Three-way.

    (c) Two-way.   (d) Scientific.

(C) Answer in a single word :

9 Which test is used to test the null hypothesis that the two samples come from population with the same median ?

10 What describes the magnitude of the discrepancy between theory and observation ?

11 ——— is a non-parametric substitute for the Parametric test.

12 The Mann-Whitney U-test was initially proposed by.

$(12 \times \frac{1}{4} = 3$ weightage$)$

II. Short answer type questions. Answer *all* questions. Each question carries a weightage of 1.

    13 Degree of freedom.

    14 Parametric tests.

    15 F-test.

    16 Computer.

    17 Latin-Square design.

    18 Regression.

    19 Additive property.

    20 Complementary subtraction.

    21 Distribution-free tests.

$(9 \times 1 = 9$ weightage$)$

III. Short essay type questions. Answer any *five* questions. Each question carries a weightage of 2 :

22 Uses of χ^2-test.

23 Wilcoxon matched pairs test.

24 Steps in computer data analysis.

25 In a certain before-after experiment the responses obtained from 1000 respondents when classified gave the following information.

Before treatment	After treatment	
	Unfavourable response	Favourable response
Favourable response	200 = A	300 = B
Unfavourable response	400 = C	100 = D

Test at 5 % level of significance in people's attitude before and after the concerning experiment.

26 Characteristics of χ^2-test.

27 Find the value of χ^2-for the following information :

Class	:	A	B	C	D	E
Observed frequency	:	8	29	44	15	4
Expected frequency	:	7	24	38	24	7

28 Characteristics of Non-Parametric tests.

(5 × 2 = 10 weightage)

IV. Essay type questions. Answer any *two* questions :

29 The results of a survey to know the educational attainment among 100 persons randomly selected are given below :

	Education			
	Middle School	High School	College	Total
Male ...	52	10	20	82
Female ...	44	12	26	82
	96	22	46	164

Can you say that education depends on sex ?

Turn over

30 Four dice were thrown 112 times and the number of times 1, 2 *or* 5 was thrown were as und

No. of times 1, 2 or 5 *thrown*	Frequencies
0	10
1	25
2	40
3	30
4	7

Find the value of χ^2 presuming that all dice were fair.

31 Application of Computer in Research.

$(2 \times 4 = 8$ weightag