

2020
UNIVERSITY OF CALCUTTA EXAMINATION CONDUCTED BY LORETO
COLLEGE
B.A/B.Sc. SEMESTER IV HONOURS EXAMINATION, CBCS SYSTEM
GROUP B
PSYCHOLOGY – HONOURS – THEORY
Statistical Methods for Psychological Research-II
CC – 9

TIME ALLOTTED: 2 HOURS

FULL MARKS: 50

The figures in the margin indicate full marks for each question.

1. **Answer any 2: (Word Limit – 150 words)** **10x2=20**
- a) Define non – parametric tests. Write the differences between parametric and non-parametric statistics. 3+7
- b) State the assumptions of student's t-test. 10
- c) An item in a questionnaire differentiates between 2 groups of individuals - high and low general ability. The computed chi-square value is 1.98, degrees of freedom (df)= 1, Critical values = 3.841 (0.05 level of significance) & 6.635 (0.01 level of significance) for df = 1. State Null and Alternative Hypotheses and Interpret the result. 10
2. **Answer any 2: (Word Limit – 600 words)** **15x2=30**
- a) Describe briefly the two different types of t-test based on the nature of the sample. 7+8
- The mean birth weight of 832 male infants is 2.9 kg with an sd of 0.65. The mean birth weight of 608 female infants is 3.3 kg with an sd of 0.55. Statistically compute and see if the mean birth weights of females are more than males. Critical score for t with a df = 1438: 1.645 (0.05)
- b) Compute the following sum using an appropriate statistical method: 15
- The scores of 8 city students and 8 suburban students in a common entrance examination are given below. Find whether or not the mean score of city students are significantly higher than that of the suburban students:
- | City students (X) | Suburban students (Y) |
|-------------------|-----------------------|
| 50 | 49 |
| 58 | 52 |
| 60 | 51 |

55	56
59	55
56	53
54	52
64	48

Critical scores for $df=14$: 1.761 (0.05) & 2.624 (0.01)

c) Discuss any 3 uses of Chi-square.

15

d) Define Chi-square. State its assumptions. What is Additive Property and Yates Correction of Chi-square?

3+3+4+5