2021

PSYCHOLOGY — HONOURS

Paper : CC-9

(Statistical Methods for Psychological Research - II)

Full Marks : 50

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Unit : 1-4

1. Write short notes on **any two** : 5×2

   (a) Null Hypothesis

   (b) Confidence Interval

   (c) Type two error

   (d) One-tailed test.

2. Answer **any one** question from the following (within **150** words) : 10×1

   (a) Distinguish between standard deviation and standard error.

   (b) State the assumptions underlying t-test.

   (c) Explain the uses of Chi-square test.

3. Answer **any two** questions from the following (within **200** words) :

   (a) One hundred twenty participants were graded according to their IQ and functional academics. Use appropriate test to find out whether there is any association between the functional academics and IQ of the students. 2+2+2+5+3+1

Functional academics	Category based on IQ		
	Mild retardation	Borderline Intelligence	Average Intelligence
Poor Performance	20	15	5
Average Performance	10	20	10
High Performance	5	15	20

   (i) State the hypothesis.

Please Turn Over

   (ii) Select suitable statistics for testing the hypothesis.

  (iii) Write down the formula of suitable statistics with explanation.

  (iv) Find out the computed value.

   (v) Compare with critical value at suitable level and interpret the result.

  (vi) Conclude the statement of findings in one line.

Critical values

df = 4	0·05	0·01
	9·488	13·277
3	7·815	11·345

(b) Differentiate between parametric and non-parametric statistics.   15

(c) The scores of spelling test of two section of students are as follows :

A 16, 14, 12, 12, 10, 8, 6, 4

B 14, 8, 7   4, 6, 4, 12

Do these two groups differ significantly with respect to their mean scores of spelling test?

2+2+2+5+3+1

   (i) State the hypothesis.

  (ii) Select suitable statistics for testing the hypothesis.

  (iii) Write down the formula of suitable statistics with explanation.

  (iv) Find out the computed value.

   (v) Compare with critical value at suitable level and interpret the result.

  (vi) Conclude the statement of findings in one line.

Critical values

	0·05	0·01
df = 13	2·1604	3·0123
14	2·1448	2·9768
15	2·1314	2·9467

(d) Discuss the steps of statistical inference.   15

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