WEST BENGAL STATE UNIVERSITY

B.A./B.Sc. Honours 4th Semester Examination, 2022

PSYACOR08T-PSYCHOLOGY (CC8)

STATISTICAL METHODS FOR PSYCHOLOGICAL RESEARCH II

Time Allotted: 2 Hours   Full Marks: 40

The figures in the margin indicate full marks.

Answer any *four* questions from the following	$5 \times 4 = 20$

1. Write a short note on levels of significance. Explain the difference between 95% and 99% confidence interval. — 2+3

2. Write a short note on inferential statistics.

3. Write a short note on use of SPSS in social science.

4. When do we use Man-Whitney U test?

5. Define 'Degrees of freedom'. Why degrees of freedom is important in statistical analysis? — 2+3

6. Define hypothesis. Differentiate between 'Alternative' and 'Null' hypotheses with examples. — 2+3

Answer any *two* questions from the following	$10 \times 2 = 20$

7. The heights (cm.) of 25 male and 20 female college students are presented in the first two columns of table below. Find if there is a significant difference between the mean heights of male and female college students. — 10

Heights (cm)	
Male (X_1)	Female (X_2)
163	164
165	155
170	160
162	154
160	160
165	153
170	159
165	166
164	163
181	166
169	163
161	165
162	167
165	164
163	162

168	160
169	159
164	167
180	157
160	158
160	
167	
174	
168	
165	

$t_{.05}(43) = 2.017$

$t_{.01}(43) = 2.695$

$t_{.05}(30) = 2.042$

$t_{.01}(30) = 2.750$

8. Write the uses of Chi-Square test. A group of college students are asked to express their attitude towards 'use of masks during pandemic'. The data are as follows.   3+7

Attitude →	Favourable	Indifferent	Unfavourable
	24	12	12

Do these results indicate a significant trend in attitude?

$df = 2.$ $0.05 \rightarrow 5.991$

                $0.01 \rightarrow 9.210$

9. What are the assumptions of one-way ANOVA? If the data lacks normality, what test would you prefer to find out mean difference? Justify your answer.   10

10. Define one-tailed test and two-tailed test. State the differences between them. Discuss with examples Type I and Type II errors.   3+3+4

    N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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