M.Phil 1st Semester Examination, 2019

ECONOMICS

PAPER —ECO-111

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks

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

Illustrate the answers wherever necessary

Write the answers to questions of each Group in separate books wherever necessary

GROUP — A

1. Answer any *two* questions :   5 × 2

   (*a*) What do you mean by descriptive statistics ? Explain the role of moments as descriptive statistics.

   (*b*) Mention two test procedures for testing the equality of means of two populations.

(c) What are the different types of research ?

(d) What are the basic principles of experimental design ? Write the important experimental designs.

2. Answer any *one* question : 10 × 1

(a) What do you mean by a two-way classification of data ? What type of ANOVA can be used for such data ? Explain briefly any one type with example.

(b) Explain the different steps in research process.

GROUP — B

3. Answer any *two* questions : 5 × 2

(a) The estimation of Cobb-Douglas Production function is given as follows :

	Coefficients	Standard Error	tStat	P-value		
Intercept	− 1.652	0.606	− 2.726	0.014	R Square	0.99508
Ln(L)	0.340	0.186	—	0.085	F	Significance F
Ln (K)	0.846	0.093	—	0.000	1719.2	0.000

(Continued)

Find out the missing t-values of Ln(L) and Ln(K) and interpret the results of the estimated regression model.

(b) What do you mean by Panel Unit Root Test ? Write down the steps of Panel Unit Roor Test in STATA.

(c) "Type I error and Type II error can be reduced simultaneously" Explain whether the statement is True or False ?

(d) Discuss some advantages of non-parametric tests over parametric tests in hypothesis testing.

4. Answer any *one* question :　　　　　　10×1

(a) Which test is more powerful, the Sign test or the Wilcoxon Signed Rank test and why ? Explain. Test the hypothesis that the median length (θ) of ear-head of a variety of wheat is $\theta_0 = 9 \cdot 9$ cm against the alternative that $\theta \neq 9 \cdot 9$ cm with $\alpha = 0 \cdot 05$ on the basis of the following 20 ear-head measurements :　$5 + 5$

$9 \cdot 3, 8 \cdot 8, 10 \cdot 7, 11 \cdot 5, 8 \cdot 2, 9 \cdot 7, 10 \cdot 3, 8 \cdot 6, 11 \cdot 3, 10 \cdot 7,$
$11 \cdot 2, 9 \cdot 0, 9 \cdot 8, 9 \cdot 3, 9 \cdot 9, 10 \cdot 3, 10 \cdot 0, 10 \cdot 1, 9 \cdot 6, 10 \cdot 4$

(b) Define in-text citation and referencing. Write down the reference of an article in APA and Harvard styles. Try to present a structure of writing a research report which has a theoretical model associated with empirical verifications. 2 + 2 + 6

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