

**2016****M.Phil.****1st Semester Examination****ECONOMICS****PAPER—ECO-111***Full Marks : 40**Time : 2 Hours*

*The figures in the right-hand margin indicate full marks.*

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

*Illustrate the answers wherever necessary.*

**Group—A**

1. Answer *any two* questions from the following : 2×5
- (a) Define coefficient of variation. Clearly explain its main uses. Mention briefly two main limitations of this measure. 1+1+3
- (b) Distinguish between cross section and time series data. Discuss how questionnaire is designed to collect primary data. 2+3

*(Turn Over)*

- (c) Discuss various sampling methods of collecting data. Define expectation and variance of a random variable.

3+2

- (d) What are the different types of variables from the viewpoint of unit of measurement?

5

2. Answer *any one* question from the following :  $1 \times 10$

- (a) What basic hypothesis is tested in a one way ANOVA for a set of observations classified in two ways? How is the test performed? Distinguish in this connection between classified observation with and without replication.

2+5+3

- (b) How do you formulate research questions in empirical research? Discuss various steps of writing a Doctoral Thesis.

4+6

### Group—B

3. Answer *any two* questions from the following :  $2 \times 5$

- (a) What is power of a test? Show that Type I error and Type II error cannot be reduced simultaneously.

2+3

- (b) Write the steps in SPSS for doing the following :  
Frequency distribution, ANOVA. 5
- (c) Explain the estimation procedure of mean difference of two sample with the help of MS-Excel. 5
- (d) Interpret the following estimated regression model relating to the Cobb-douglas production function  
 $Q = A K^\alpha L^\beta$ .

$$\ln Q = -1.65 + 0.85 \ln k + 0.34 \ln L$$

$$(-2.73) \quad (9.06) \quad (1.83)$$

$$[0.01] \quad [0.000] \quad [0.08]$$

$$R^2 = 0.99, F = 1719.2 \quad [0.000]$$

4. Answer *any one* question from the following : 1×10

- (a) Discuss few advantages and disadvantages of parametric test.

The table below shows the hours of relief provided by two analgesic drugs in 12 patients suffering from arthritis. Is there any evidence that one drug provides longer relief than the other ?

Drug A	Drug B
2.0	3.5
3.6	5.7
2.6	2.9
2.6	2.4
7.3	9.9
3.4	3.3
14.9	16.7
6.6	6.0
2.3	3.8
2.0	4.0
6.8	9.1
8.5	20.9

5+5

- (b) What are the different types of research report ? What are the different types of study designs ? 10
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