Exam Date & Time: 29-Sep-2020 (02:00 PM - 05:45 PM)

PSG COLLEGE OF ARTS AND SCIENCE

Note: Writing 3hrs: Checking & Inserting Image : 30mins

MSc DEGREE EXAMINATION MAY 2020
(Fourth Semester)

Branch - STATISTICS

ECONOMETRICS AND PLANNING MODELS [18STP21]

Marks: 75   **Duration: 210 mins.**

SECTION A

Answer all the questions.

1)   Econometrics is the study of
            (i) Economic Variables
            (ii) Estimation
            (iii) Forecasting   (1)
            (iv) All the above

2)   Forecasting power of the model is based on
            (i) r^2 value   (ii) $(1-r^2)$ value
            (iii) χ^2 value   (iv)   none   (1)

3)   Linear model means that
            (i) degree of x is 1
            (ii) degree of the coefficient is 1
            (iii) degree of error is 1   (1)
            (iv) none of these

4)   LS estimation is based on minimizing the squared
            (i) Error
            (ii) Distribution
            (iii) Observation   (1)
            (iv) None

5)   Multiple Regression analysis is used to select the key
            (i) Distribution
            (ii) Variables
            (iii) Error   (1)
            (iv) None

6)   Auto correlation means
            (i)   Correlation bet X and Y   (ii)   Correlation bet X_i, X_j
            (iii) Correlation bet (Y_i, e_i) (iv) None   (1)

7)   Multicollinearity causes   (1)
            (i) Low R^2
            (ii) Biased coefficient estimates
            (iii) Biased Variance
            (iv) None

8)   Durbin-Watson statistic test is used to test the
            (i) Linearity
            (ii) Homoscedasticity
            (iii) Multicollinearity   (1)
            (iv) None

9)   A pair of equation to determine the values of 2 variables is called
            (i) Simultaneous equation
            (ii) Paired equation
            (iii) Simple equation   (1)
            (iv) Quadratic equation

10)   FIML – is called
            (i) First Information Max Likelihood
            (ii) Full Information Max Likelihood
            (iii) First Information Moment Estimation   (1)
            (iv) None

SECTION B

Answer all the questions.

11)   Explain econometric models and state its goals.

                                                                                                                               (7)

   a)

   [OR]   Explain the various steps involved in estimation of the model in econometrics.
   b)   (7)

12)   Explain Simple Regression Models and state its applications.

                                                                                                                               (7)

   a)

   [OR]   Explain OLS estimation of simple regression model.
   b)   (7)

13)   Explain ANOVA with reference to regression model.

                                                                                                                               (7)

   a)

   [OR]   Discuss the test for auto correlation.
   b)   (7)

14)   Explain – Simultaneous equation model and its applications.

                                                                                                                               (7)

   a)

   [OR]   Explain - Identification problem in Econometric models.
   b)   (7)

15)   Explain – Harrod-Domar model.   (7)

a)

[OR]   Discuss – Mahalanobis model.   (7)

b)

SECTION C

Answer 3 out of 5 questions.

16)   Elucidate the scope and division of Econometric models in real life applications.   (10)

17)   Explain multiple regression models and its applications.   (10)

18)   Explain multicollinearity and how to overcome?   (10)

19)   Explain 2SLS method of estimation.   (10)

20)   Explain Planning strategies in India.   (10)

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