3rd Semester

MA Economics

Multiple Choice Questions (Private Registration)

EC010302 -Econometrics - I

1. Econometrics means _____ measurement
   A. Economic
   B. Social
   C. Statistical
   D. None of the above
2. First step in methodology of econometrics is
   A. Stating the theory or hypothesis
   B. Deriving conclusion
   C. Obtaining data
   D. Deriving hypothesis
3. Y = β1 + β2x , in this equation y is the
   A. Independent variable
   B. Dependent variable
   C. Slope
   D. Intercept
4. Y = β1 + β2x , in this equation x is the
   A. Dependent variable
   B. Independent variable
   C. Static variable
   D. Permanent variable
5. If the model has only one equation, as in the preceding example, it is called a
   A. Single-equation model
   B. Multi equation model
   C. Poly model
   D. None of the above
6. Mathematical model of a function assumes that there is an _____ between the variable
   A. exact relationship
   B. Inexact relationship
   C. Cannot be determined
   D. None of the above
7. Y = β1 + β2x + u ; where u, known as the
   A. Error term
   B. Intercept
   C. Slope

D. None of the above

8. Confirmation or refutation of economic theories on the basis of sample evidence is based on a branch of statistical theory known as
   A. Statistical inference
   B. Error term
   C. Null hypothesis
   D. None of the above

9. The term regression was introduced by
   A. Karl pearson
   B. Keynes
   C. Francis galton
   D. George dantzwig

10. Regression analysis implies causation:
   A. True
   B. False
   C. Cannot be determined
   D. None of the above

11. Dependent variable is also called as
   A. Predictor
   B. Regressor
   C. Exogenous
   D. Response

12. In multiple regression there is --------------- explanatory variable
   A. One
   B. None
   C. More than one
   D. None of the above

13. Data collected at one point in time is called:
   A. Time series data
   B. Pooled data
   C. Time series and pooled data
   D. cross section data

14. The researcher should always keep in mind that the results of research are only as good as the _____ of the data.
   A. Quantity
   B. Curiosity
   C. Quality
   D. None of the above

15. Variables that have none of the features of the ratio scale variables is called
   A. Ordinal scale
   B. Ratio scale
   C. Interval scale
   D. Nominal scale

16. E(y | x), is read as the expected value of
   A. X given the value of y

B. y given the value of x

C. Covariance of x,y

D. None of the above

17. A _____ is simply the locus of the conditional means of the dependent variable for the fixed values of the explanatory variable(s)

A. Sample regression curve

B. Population regression curve

C. Error curve

D. None of the above

18. $E(y \mid x_i) = \beta_1 + \beta_2 x$, β_1 and β_2 are unknown but fixed parameters known as the

A. Intercept

B. Slope

C. Regression coefficients

D. None of the above

19. "linear" regression will always mean a regression that is linear in the

A. Intercept alone

B. Slope alone

C. Parameters

D. None of the above

20. Ols estimators are

A. Interval estimators

B. Point estimators

C. Cannot be determined

D. None of the above

21. clrm means

A. Classical linear regression model

B. Classical log regress model

C. Classical linear retro model

D. Correlated log regress model

22. Heteroscedasticity, means

A. Unequal spread

B. Equal spread

C. Correlation

D. None of the above

23. The number of observations n must be _____than the number of parameters to be estimated

A. Smaller

B. Greater

C. Equal

D. None of above

24. Two events a and b are said to be mutually exclusive , if

A. $P(b/a) = 1$

B. $P(a/b) = 1$

C. $P(a \text{ and } b) = 0$

D. $P(a \text{ and } b) = 1$

25. a type i error occurs when we:
   A. Reject a true null hypothesis
   B. Reject a false null hypothesis
   C. Do not reject a false hypothesis
   D. Do not reject a true hypothesis

26.   Blue means..?

A. Best linear unbiased estimator.
   B. Biased linear unit estimator.
   C. Bohr's linear unbiased estimator.
   D. Best linear unit estimator.

27. A sure way of removing multicollinearity from the model is to
   A. .workwithpanel data
   B. .dropvariablesthatcausemulticollinearityinthefirstplace
   C. Transformthevariablesbyfirstdifferencingthem
   D. Obtainingadditionalsampledata

28.autocorrelation is generally occurred in
   A. Pooled data
   B. Time series data
   C. Cross section data
   D. None of the above

29. Violation of assumption of constant variance of residual is called as

   A. Multicollenearity
   B. Heteroscedasticity
   C. Homoscedasticity
   D. None of the above

30. Formula for coefficient of determination is :

   A. 1+ rss/tss
   B. 1-rss/tss
   C. 1* rss/tss
   D. None of the above

31. Durbin watson test is associated with
   A. Heteroscedasticity
   B. . Multicollenearity

C. Autocorrelation

D. Both a and c

32. All are the types of specification error except :

A. Omission of relevant variable

B. Inclusion of unnecessary variables

C. Errors of measurement

D. Over identified

33. White's test is used for detection of

A. Multicollenearity

B. Heteroscedasticity

C. Autocorrelation'

D. None of the above

34. Which one is not the assumption of ols ?

A. Perfect multicollenearity

B. Zero covariance between the error terms

C equal variance of disturbances

D. Mean value of disturbances

35. Scaling a dependent variable in log form in the log lin model will ---------

A. Change both the intercept and slope

B. Change the slope but not intercept

C. Change the intercept but not slope

D. Intercept and slope both remain unchanged

36. Individual respondents, focus group, , panel of respondents are categorised as

A. Primary data sources

B. Secondary data source

C. Itemised data source

D. Pointed data source

37. What is explained variation divided by total variation?

A. Sum of squares due to regression

B. Coefficient of determination

C. Standard error of estimate

D. Coefficient of correlation

38. The probability of a type i error is determined by

A) the researcher

b) the sample size

C)the degree of falsity of the null hypothesis

D) both b) and c) above

39. When the null is true the power curve measures

A) the type i error probability

 b) the type ii error probability

C) one minus the type i error probability
D) one minus the type ii error probability

40. Other things equal, when the type i error probability is increased the power curve

A) shifts up

 b) shifts down
 c) is unaffected
D) none of the above

41. Coefficient of determination r 2 (two-variable case) or r2 (multiple regression) is a summary measure that tells how well the _____ fits the data.
A. Population regression line
B. Sample regression line
C. Intercept
D. None of the above

42. _____ correlation does not necessarily imply independence
A. One
B. Negative
C. Positive
D. Zero

43. The overall goodness of fit of the regression model is measured by the _____

A. Regression

B. Correlation

C. Coefficient of determination

D. None of the above

44. What is the meaning of the term "heteroscedasticity"?

A)the variance of the errors is not constant

B)the variance of the dependent variable is not constant

C) the errors are not linearly independent of one another

D)the errors have non-zero mean

45.)what would be then consequences for the ols estimator if heteroscedasticity is present in a regression model but ignored?

A) it will be ignored

B) it will be inconsistent

C) it will be inefficient

D)all of a),c), b) will be true.

46. Near multicollinearity occurs when

A)two or more explanatory variables are perfectly correlated with one another

B)the explanatory variables are highly correlated with the error term

c)the explanatory variables are highly correlated with the dependent variable

D) two or more explanatory variables are highly correlated with one another

47. Negative residual autocorrelation is indicated by which one of the following

A)a cyclical pattern in the residual

B)an alternating pattern in the residuals

C)a complete randomness in the residuals

D) residuals is that are all close to zero

48. Which one of the following is not a plausible remedy for near multicollinearity?

a)use principal components analysis

b)drop one of the collinear variables

c)use a longer run of data

D)take logarithems of each of the variables

49. One of the assumption of clrm is that the number of observations in the sample must be greater the number of

A)regressor

B)regressands

C)dependent variable

D)dependent and independent variable

50. If there exist high multicollinearity, then the regression coefficients are,

A) determinate

B)indeterminate

C)infinite values

D)small negative values

51. If multicollinearity is perfect in a regression model then the regression coefficients of the explanatory variables are

 a) determinate

B)indeterminate

C)infinite values

D)small negative values

52. If multicollinearity is perfect in a regression model the standard errors of the regression coefficients are

A) determinate

B)indeterminate

C)infinite values

 d)small negative values

53.)in a regression model with multicollinearity being very high, the estimators are

A. Unbiased

B. Consistent

C. Standard errors are correctly estimated

D. All of the above

54. Multicollinearity is essentially a

A. Sample phenomenon

B. Population phenomenon

 c. Both a and b

D. Either a or b

55. Which of the following statements is not true about a regression model in the presence of multicol-linearity

 a. T ratio of coefficients tends to be significantly

B. R2 is high

C. Ols estimators are not blue

D. Ols estimators are sensitive to small changes in the data

56. Which of these is not a symptom of multicollinearity in a regression model

A. High r2 with few significant t ratios for coefficients

B. High pair-wise correlations among regressors

C. High r2 and all partial correlation among regressors

D. Vif of a variable is below 10

57. A sure way of removing multicollinearity from the model is to

A. Work with panel data

B. Drop variables that cause multicollinearity in the first place

C. Transform the variables by first differencing them

D. Obtaining additional sample data

58. Assumption of 'no multicollinearity' means the correlation between the regresand and regressor is

A. High

B. Low

C. Zero

D. Any of the above

59. An example of a perfect collinear relationship is a quadratic or cubic function. This statement is

A. True

B. False

C. Depends on the functional form

D. Depends on economic theory

60. Multicollinearity is limited to

A. Cross-section data

B. Time series data

C. Pooled data

D. All of the above

61. Multicollinearity does not hurt is the objective of the estimation is

A. Forecasting only

B. Prediction only

C. Getting reliable estimation of parameters

 d. Prediction or forecasting

62. As a remedy to multicollinearity, doing this may lead to specification bias

A. Transforming the variables

B. Adding new data

C. Dropping one of the collinear variables

 D. First differencing the successive valucs of the variable

63. F test in most cases will reject the hypothesis that the partial slope coefifcients are simultaneously equal to zero. This happens when

A. Multicollinearity is present

 B. Multicollinearity is absent

C. Multicollinearity may be present or may not be present

D. Depends on the f-value

64. Heteroscedasticity is more likely a problem of

A)cross-section data

B)time series data

C)pooled data

D)all of the above

65. The coefficient estimated in the presence of heteroscedasticity are not

A)unbiased estimators

B) consistent estimators

C)efficient estimators

D)linear estimators

66. The regression coefficient estimated in the presence of autocorrelation in the sample data are not

A. Unbiased estimators

B. Consistent estimators

C efficient estimators

D. Linear estimators

67. Estimating the coefficients of regression model in the presence of autocorrelation leads to this test being not valid

A)t test

 B)f test

C)chi-square test

 D) all of the above

68. There are several reasons for serial correlation to occur in a sample data. Which of these is not

A). Business cycle

B). Specification bias

C) manipulation of data

D). Stationary data series

 69. When supply of a commodity, for example agricultural commodities, react to price with a lag of one time period due to gestation period in production, such a phenomenon is referred to as

A. Lag phenomenon

B. Cobweb phenomenon

C. Inertia

D. Business cycle

70. If in our regression model, one of the explanatory variables included is the lagged value of the dependent variable, then the model is referred to as

A. Best fit model

B. Dynamic model

C. Autoregressive model

D. First-difference form

71. In the regression function y=α + βx +c

 A)x is the regressor

B)y is the regressor

C)x is the regressand

D)none of these

72.the full form of clr is

A)class line ratio

B)classical linear regression

 C) classical linear relation

D) none of the above

73. Locus of the conditional mean of the dependent variable for the fixed values of the explanatory variable

A)indifference curve

 B)population regression curve

C)production possibility curve

D)none of these.

74. Sample regression function is the estimated version of the_____

 A)estimated version of population regression function

B)estimated version of population correlation function

C)not an estimated version of population regression function

D)both b and c

75. Full form of ols

A)ordinary least square method

B)ordinary least statistical method

C)ordinary least sample method

D) both b and c

76. The conditional mean of y is

 A) the expected value of y for given values of the independent variables, xi

 B) the expected value of y for given values of the independent variables, ui.

C) the expected value of y for given values of the independent variables, yi.

D)both b and c

77. An estimate is

A) the numerical value obtained after applying a formula to a given data set

 B) the p value obtained after applying a formula to a given data set

C) the table value obtained after applying a formula to a given data set

D) the correlation coefficient obtained after applying a formula to a given data set

78. Student 't' test was formulated by

A)william sealy gosset

B)carl friedrick gauss

C)durbin watson

D) both b and c

79.blue is

A)best linear unbiased estimator

 B)best linear unconditional estimator

C)basic linear unconditional estimator

D)both b and c

80. Information about numerical values of variables from period to period is

 A)time series data

B)cross-section data

C)pooled data

D)panel data

81. Data on one or variables collected at a given point of time

A)time series data

B)cross-section data

C)pooled data

D)panel data

82. I)pooled data imply combination of time series and cross sectional data.

Ii) panel data is special type of pooled data in which the same cross-section unit is surveyed over time

A)only a is correct

 B)only b is correct

C)both a and b are wrong

D)both a and b are correct

83. I)least square estimators. Unbiased, minimum variance, linear is blue

 ii) least square estimators. Biased, minimum variance, linear is blue

Iii least square estimators. Unbiased, maximum variance, linear is blue

A)only a

B)only b

C) both a and b

D) only c

84. The statistical properties of ols estimators are

A)linearity, unbiasedness, and minimum variance

B) linearity and unbiasedness

C) unbiasedness, and minimum variance

D) linearity and minimum variance

85. Procedure for testing hypothesis

i)set up hypothesis

Ii)selecting the level of significance

iii)select the suitable test statistic

Iv)determining the critical region

V)performing computations

Vi)decision- making

a)i, ii, and iv

B)i,ii,iii,iv

C)i,iii,iv

D)i,ii,iii,iv,v,vi.

86. Method of ordinary least square is attributed to

A)carl friedrick gauss

B)william sealy goss

C)durbin watson

D) both b and c

87. R2 refers to

A)coefficient of determination

B)coefficient of correlation

C)square of correlation coefficient

D)both a and c

88. Coefficient of determination shows,

A)variation in the dependent variable y is explained by the independent variable x

B) variation in the independent variable y is explained by the dependent variable x.

C)both a and b are correct

D)both a and b are wrong

89. The violation of the assumption of constant variance of the residual is known as

A)heteroscedasticity

B)homoscedasticity

C)both a and b are correct

D)both a and b are wrong

90. Multicollinearity is used to denote,

A)the presence of linear relationships among explanatory variables

B) the presence of non-linear relationships among explanatory variables

C) the presence of linear relationships among dependent variables

D) the presence of linear relationships among endogenous variables.

91. The larger the standard error of the estimator, the greater is the uncertainty of estimating the true value of the unknown parameters. This statement is

A. True

B. False

C. May be true

D. Nonsense statement

92. Standard error of an estimator is a measure of

A. Population estimator

B. Precision of the estimator

C. Power of the estimator

D) confidence interval of the estimator

93. In yi= β1+β2x+ui,ui can take values that are

 A.only positive

B.only negative

C.only zero

D.positive, negative or zero

94. In yi= β1+β2x+ui,ui

A.represent the missing values of y

B.acts as proxy for all the omitted variables that may affect y

 C. Acts as proxy for important variable that affect y

D.represent measurement errors

95. In yi=e(y/xi) +ui, the deterministic component is given by

A.yi

 b. E(y/xi)

C.ui

D.e(y/xi) + ui

96. Yi= β1+β2x+ui represents

 A.sample regression function

B.population regression function

 C.nonlinear regression function

D.estimate of regression function

97. $\hat{y}_i = \hat{\beta}_1 + \hat{\beta}_2 x + \hat{u}_i$ represents

A.sample regression function

B.population regression function

C.nonlinear regression function

D.estimate of regression function

98. In $\hat{y}_i = \hat{\beta}_1 + \hat{\beta}_2 x + \hat{u}_i$, β_1 and β_2 represents

A.fixed component

B.residual component

C.estimates

D.estimators

99. In sample regression function, the observed yi can be expressed as $y_i = \hat{y}_i + \hat{\beta}_1 + \hat{\beta}_2 x + \hat{u}_i$. This statement is

A. True

B. False

C. Depends on $\hat{\beta}_2$

D.depends on $\hat{y}_i$

100. The statement that-there can be more than one srf representing a population regression function is

A. Always true

B.always false

C.sometimes true, sometimes false

D.nonsense statement

Answer Key

1 A

2 A

3 B

4 B

5 A

6 A

7 A

8 A

9 C

10 B

11 D

12 C

13 D

14 C

15 D

16 B

17 B

18 C

19 C

20 B

21 A

22 A

23 B

24 C

25 A

26 A

27 B

28 B

29 B

30 B

31 C

32 D

33 B

34 A

35 C

36 A

37 B

38 A

39 A

40 A

41 B

42 D

43 C

44 A

45 C

46 D

47 B

48 D

49 A

50 A

51 B

52 C

53 A

54 A

55 C

56 D

57 B

58 D

59 A

60 D

61 D

62 C

63 B

64 A

65 C

66 C

67 D

68 D

69 B

70 C

71 A

72 B

73 B

74 A

75 A

76 A

77 A

78 A

79 A

80 A

81 B

82 D

83 A

84 A

85 D

86 A

87 D

88 A

89 A

90 A

91 A

92 B

93 D

94 B

95 B

96 B

97 A

98 D

99 B

100 A