1) Which of the following assumptions are required to show the consistency, unbiasedness and efficiency of the OLS estimator?

i) $E(ut) = 0$

ii) $Var(ut) = \sigma 2$

iii) $Cov(ut, ut-j) = 0$ and j

iv) $ut \sim N(0, \sigma^2)$

a) ii and iv only

b) i and iii only

c) i, ii, and iii only

d) i, ii, iii and iv

2) Which of the following may be consequences of one or more of the CLRM assumptions being violated?

i) The coefficient estimates are not optimal

ii) The standard error estimates are not optimal

ii) The distributions assumed for the test statistics are inappropriate

¡v) Conclusions regarding the strength of relationships between the dependent and independent variables may be invalid.

a)ii and iv only

b) i and iii only

c) i, ii, and iii

d) I,ii,iii and iv.

3) 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

4)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.

5) 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

6)Which of the following are plausible approaches to dealing with a model that exhibits heteroscedasticity?

a) Take logarithms of each of the variables

b) Add lagged values of the variables to the regression equation

c) Use suitably modified standard error

d)Use a generalized least square procedure

a)i and iv

b)i and iii

ci, ii, and iv only

d) i, ii, iii, and iv

7)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

8)If OLS is used in the presence of autocorrelation, which of the following will be like consequences?
i)Coefficient estimate may be misleading

ii) Hypothesis tests could reach the wrong conclusions

iii) Forecasts made from the model could be biased

iv)Standard errors may inappropriate

a)ii and iv

b)i and iii

c)I,ii and iii

d)i ii, iii and iv

9)Which of the following are plausible approaches to dealing with residual autocorrelation?

a)Take logarithms of each of the variables

b)Add lagged values of the variables to the regression equation

c) Use dummy variables to remove outlying observations

d)Try a model in first differenced form rather than in levels

a)ii and iv

b)i and iii

ci, ii, and iii only

d) i, ii, iii, and iv.

10)Which of the following could result in autocorrelated residuals?

i)Slowness of response of the dependent variable to changes in the values of the independent variables

ii)Over-reaction of the dependent variable to changes in the independent variables

iii)Omission of relevant explanatory variables that are autocorrelated

iv)Outliers in the data

a. ii and iv

b. i and iii

c. i ,ii and iii

d. I,ii,iii,iv

11) Including relevant lagged values of the dependent variable on the right hand side of a regression equation could lead to which one of the following?

i)Biased but consistent coefficient estimate

ii)Biased and inconsistent coefficient estimate

iii) Unbiased but inconsistent coefficient estimate

iv) Unbiased and consistent but inefficient coefficient estimate

12 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

13 What will be the properties of the OLS estimator in the presence of multicollinearity?

a) It will be consistent unbiased and efficient

b) It will be consistent and unbiased but not efficient

c)It will be consistent but not unbiased

d) It will not be consistent

14 Which one of the following is NOT an example of mis- specification of functional form?

a) Using a linear specification when y scales as a function of the squares of x

b) Using a linear specification when a double-logarathimic model would be more appropriate

c) Modelling y as a function of x when in fact it scales as a function of 1/x

d) Excluding a relevant variable from a linear regression model

15) If the residuals from a regression estimated using a small sample of data are not normally distributed, which one of the following consequences may arise?

a)The coefficient estimate will be unbiased inconsistent

b)The coefficient estimate will be biased consistent

c)The coefficient estimate will be biased inconsistent

d)Test statistics concerning the parameter will not follow their assumed distributions.

16 If a relevant variable is omitted from a regression equation, the consequences would be that:

i) The standard errors would be biased

ii) If the excluded variable is uncorrelated with all of the included variables, all of the slope coefficients will be inconsistent.

iii) If the excluded variable is uncorrelated with all of the included variables, all the intercept coefficients will be inconsistent.

iv) If the excluded variable is uncorrelated with all of the included variables, all of the slope and intercept coefficients will be consistent and unbiased but inefficient

i)ii and iv

ii)i and iii

iii)i,ii, and iii

iv)i,ii,iii, and iv

17). Consider the regression model, Yi= β1+β2xi2+…+βkxik+ei where errors may be heteroskedastic.Choose the most incorrect statement.

(a) The OLS estimators are consistent and unbiased.

(b) We should report the OLS estimates with the robust standard errors.

(c) The Gauss-Markov theorem may not apply.

(d) The GLS cannot be used because we do not know the error variances in practice.

(e) We should take care of heteroskedasticity only if homoskedusticity is rejected.

18)The assumption that the error terms in a regression model follow the normal distribution with zero mean and constant variance is required

a)Point estimation of the parameters

b)Hypothesis testing and inference

c)Estimation of the regression model using OLS method

d)Both a and b

19)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

20)If there exist high multicollinearity, then the regression coefficients are,

a) Determinate

b)Indeterminate

c)Infinite values

d)Small negative values

21)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

22) 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

23)The coefficients of explanatory variables in a regression model with less than perfect multicollinearity cannot be estimated with great precision and accuracy. This statement is

a)Always true

b)Always false

c)Sometimes true

d)Nonsense statement

24)In a regression model with multicollinearity being very high, the estimators

a Are unbiased

b. Are consistent

c. Standard errors are correctly estimated

d All of the above

25) Micronumerosity in a regression model according to Goldberger refers to

a) A type of multicollinearity

b). Sample size n being zero

c) Sample size n being slightly greater than the number of parameters to be estimated

d)Sample size n being just smaller than the number of parameters to be estimated