Test Bank for Introductory Econometrics A Modern Approach 7th Edition by Wooldridge

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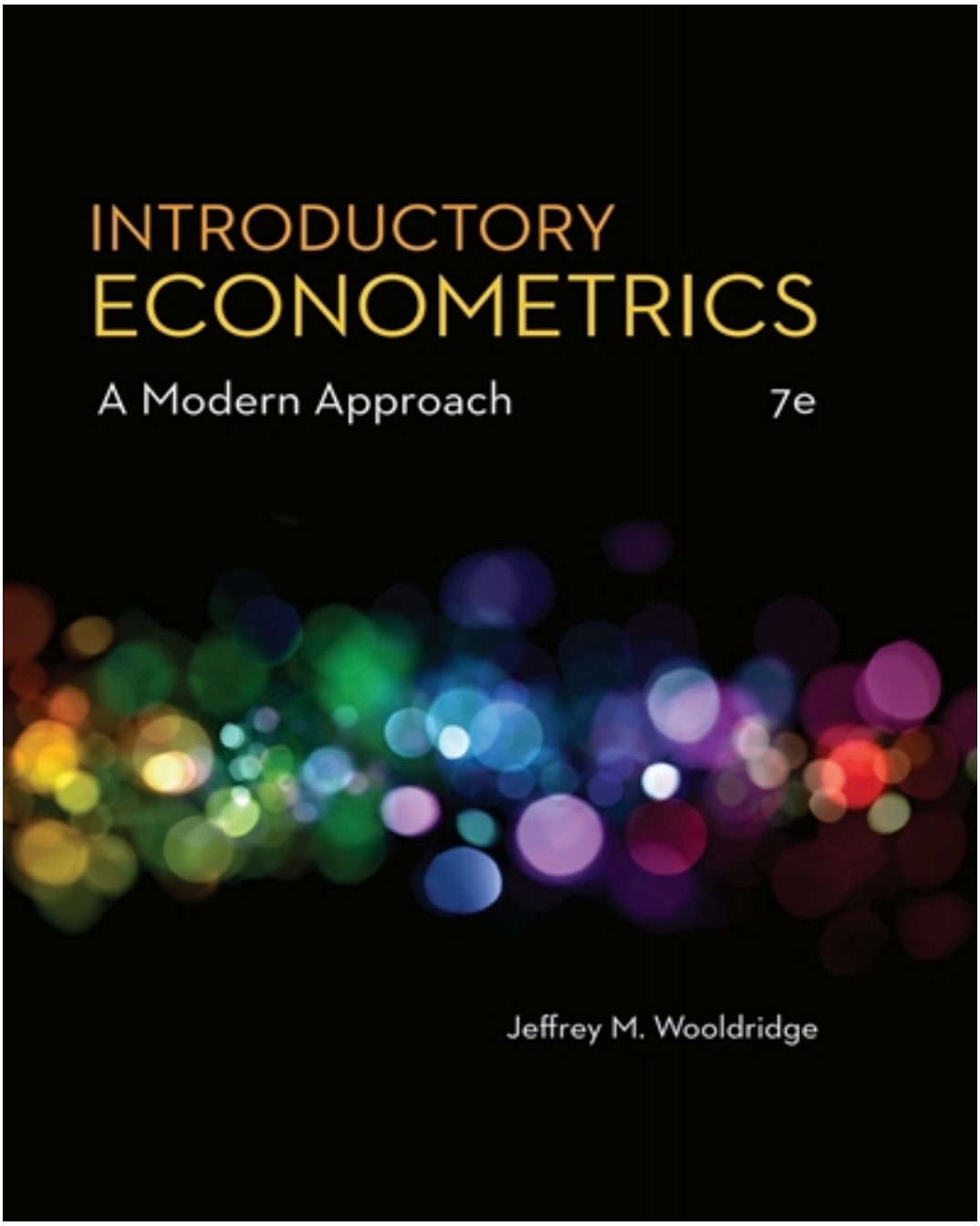

Test Bank

TRUE/FALSE

1 : A natural measure of the association between two random variables is the correlation coefficient.
A : true
B : false

Correct Answer : A

2 : Simple regression is an analysis of correlation between two variables.?
A : true
B : false

Correct Answer : A

3 : The sample covariance between the regressors and the Ordinary Least Square (OLS) residuals is always positive.
A : true
B : false

Correct Answer : B

4 : R2 is the ratio of the explained variation compared to the total variation.
A : true
B : false

Correct Answer : A

5 : There are n-1 degrees of freedom in Ordinary Least Square residuals.
A : true
B : false

Correct Answer : B

6 : The variance of the slope estimator increases as the error variance decreases.
A : true
B : false

Correct Answer : B

7 : In general, the constant that produces the smallest sum of squared deviations is always the sample average.
A : true
B : false

Correct Answer : A

8 : In a simple linear regression model, wage = β_0 + male + u

, where male is a binary variable (1 if a person is male, and 0 otherwise), is the difference in the average wage between males and non-males.
A : true
B : false

Correct Answer : A

MULTIPLE CHOICE

9 : A dependent variable is also known as a(n) _____.
A : explanatory variable
B : control variable
C : predictor variable
D : response variable

Correct Answer : D

10 : If a change in variable x causes a change in variable y, variable x is called the _____.
A : dependent variable
B : explained variable
C : explanatory variable
D : response variable

Correct Answer : C

11 : $y = \beta_0 + \beta_1 x + u, \beta_0$

In the equation is the _____.
A : dependent variable
B : independent variable
C : slope parameter
D : intercept parameter

Correct Answer : D

12 : $y = \beta_0 + \beta_1 x + u$

In the equation , what is the estimated value of ?

A :

B :

C :

Correct Answer : A

13 : $c = \beta_0 + \beta_1 i + u$

In the equation , c denotes consumption and i denotes income. What is the residual for the 5th observation if =$500 and =$475?

D :
A : $975
B : $300
C : $25
D : $50

Correct Answer : C

14 : What does the equation denote if the regression equation is $\hat{y} = \hat{\beta}_0 + \hat{\beta}_1 x$?

A : The explained sum of squares
B : The total sum of squares
C : The sample regression function
D : The population regression function

Correct Answer : C

15 : If xi and yi are positively correlated in the sample then the estimated slope is _____.?

A : ?less than zero
B : ?greater than zero
C : ?equal to zero
D : ?equal to one

Correct Answer : B

16 : The sample correlation between xi and yi is denoted by _____.?

Correct Answer : D

17 : Consider the following regression model: y = α 0 + 1x1 + u. Which of the following is a property of Ordinary Least Square (OLS) estimates of this model and their associated statistics?

A : The sum, and therefore the sample average of the OLS residuals, is positive.
B : The sum of the OLS residuals is negative.
C : The sample covariance between the regressors and the OLS residuals is positive.
) always lies on the OLS regression line.

Correct Answer : D

18 : $y_i = \beta_0 + \beta_1 x_1 + u_1$

The explained sum of squares for the regression function, , is defined as _____.

A : ?
B : ? The point (
C : ?
D : ?

Correct Answer : B

19 : If the total sum of squares (SST) in a regression equation is 81, and the residual sum of squares (SSR) is 25, what is the explained sum of squares (SSE)?

A : 64
B : 56
C : 32

D : 18

Correct Answer : B

20 : If the residual sum of squares (SSR) in a regression analysis is 66 and the total sum of squares (SST) is equal to 90, what is the value of the coefficient of determination?
A : 0.73
B : 0.55
C : 0.27
D : 1.2

Correct Answer : C

21 : Which of the following is a nonlinear regression model?
A : $y =$

$_0 + _1x^{1/2} + u$

$_0 + _1\log x + u$

B : $\log y = _0 + _1x) + u$

$_0 + _1x + u$

C : $y = 1 / ($

Correct Answer : C

D : $y =$

22 : In a regression equation, changing the units of measurement of only the independent variable does not affect the _____.
A : ?dependent variable
B : ?slope
C : ?intercept
D : ?error term

Correct Answer : C

23 : Which of the following is assumed for establishing the unbiasedness of Ordinary Least Square (OLS) estimates?
A : The error term has an expected value of 1 given any value of the explanatory variable.
B : The regression equation is linear in the explained and explanatory variables.
C : The sample outcomes on the explanatory variable are all the same value.
D : The error term has the same variance given any value of the explanatory variable.

Correct Answer : B

24 : The error term in a regression equation is said to exhibit homoskedasticty if _____.
A : it has zero conditional mean
B : it has the same variance for all values of the explanatory variable
C : it has the same value for all values of the explanatory variable
D : if the error term has a value of one given any value of the explanatory variable

Correct Answer : B

25 : In the regression of y on x, the error term exhibits heteroskedasticity if _____.
A : it has a constant variance
B : Var($y|x$) is a function of x
C : x is a function of y
D : y is a function of x

Correct Answer : B

26 : What is the estimated value of the slope parameter when the regression equation, y = α 0 + 1x1 + u passes through the origin?

A :

B :

Correct Answer : C

C :
27 : Consider a simple linear regression model, y = ?0+ ?1x + u, . What does the zero conditional mean assumption imply?
A : The expected value of the error term, u , is zero, regardless of what the value of the explanatory variable, x, is.
D :
B : The estimated average value of $?_1$ is zero.
C : The expected value of the explained variable, y , is zero, regardless of what the value of the explanatory variable, x , is.
D : The estimated average value of $?_0$ is zero.

Correct Answer : A

28 : Which of the following will cause Ordinary Least Square (OLS) estimates of a simple regression model, y = + x + u β_0

to be biased?

A : Every individual in the population has the same probability of being observed in the sample.

B : The observed values of span a wide range.

C : The constant,

is greater than the coefficient, .

D : The constant, is greater than the coefficient, x .

Correct Answer : D

29 : Which of the following is an example of a dummy variable?
A : A person’s hourly wage
B : The number of years of education someone has
C : The number of years of work experience someone has
D : Whether or not someone has a college degree

Correct Answer : D

30 : Consider a simple linear regression model, wage = β_0 + male + u

, where male is a binary variable (1 if a person is male, and 0 otherwise). Now suppose that we know being a male means there is a lower probability of attaining higher education, another factor that is also expected to affect wage. Which of the key assumptions made to establish unbiasedness of OLS estimates do not hold?
A : Linear in parameters
B : Random sampling
C : Sample variation in the explanatory variable
D : Zero conditional mean

Correct Answer : D