

FINAL EXAMINATION ANSWER KEY
May 10, 2006

VERSION A

I. MULTIPLE CHOICE: [2 pts each—42 pts total]

(1)c. (2)b. (3)a. (4)b. (5)d. (6)b. (7)c. (8)b. (9)c. (10)c. (11)e. (12)b. (13)a. (14)d. (15)e.
(16)c. (17)a. (18)a. (19)a. (20)e. (21)c.

II. PROBLEMS

(1) [LS confidence intervals, tests, elasticity: 16 pts] a. 3400 kilowatt-hours. b. 700 kilowatt-hours. c. elasticity = -0.7. d. $3400 \pm 1146.6 = (2253.4, 4546.6)$. e. test statistic = -2.8, critical point = -1.645, reject null hypothesis.

(2) [Dummy variables and structural change: 22 pts] a. multicollinearity. b. 0.019. c. 0.016. d. -0.0067. e. equation [1]. f. equation [4]. g. DOF in numerator = 6, DOF in denominator = 42, F-statistic = 8.0, critical point = about 2.34, reject null hypothesis.

(3) [LS tests: 6 pts] Test statistic = 1.5, critical points = ± 1.96 , cannot reject null hypothesis.

(4) [Breusch-Godfrey test: 8 pts] Degrees of freedom = 1, test statistic = 4.8, critical point = 3.84, reject null hypothesis.

(5) [Forecasting: 6 pts] a. 22.8. b. 15.2. c. 13.0.

VERSION B

I. MULTIPLE CHOICE: [2 pts each—42 pts total]

(1)d. (2)d. (3)c. (4)b. (5)a. (6)c. (7)e. (8)d. (9)a. (10)b. (11)c. (12)e. (13)b. (14)b. (15)b.
(16)e. (17)b. (18)d. (19)b. (20)c. (21)d.

II. PROBLEMS

(1) [LS confidence intervals, tests, elasticity: 16 pts] a. 2880 kilowatt-hours. b. 432 kilowatt-hours. c. elasticity = -0.6. d. $2880 \pm 911.4 = (1968.6, 3791.4)$. e. test statistic = -3.2, critical point = -1.645, reject null hypothesis.

(2) [Dummy variables and structural change: 22 pts] a. multicollinearity. b. 0.021. c. -0.0066. d. -0.0067. e. equation [1]. f. equation [4]. g. DOF in numerator = 6, DOF in denominator = 3, F-statistic = 5.0, critical point = between 2.76 and 2.84, reject null hypothesis.

(3) [LS tests: 6 pts] Test statistic=2.4, critical points= ± 1.96 , reject null hypothesis.

(4) [Breusch-Godfrey test: 8 pts] Degrees of freedom=1, test statistic=3.0, critical point=3.84, cannot reject null hypothesis.

(5) [Forecasting: 6 pts] a. 37.4. b. 37.84. c. 39.

[end of answer key]