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MAIN EXAMINATION

AUGUST – DECEMBER 2015 TRIMESTER

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTING AND FINANCE

MBA REGULAR / EVENING PROGRAMME

CEC 520: MANAGERIAL ECONOMICS

Date: DECEMBER 2015

Duration: 3 Hours

INSTRUCTIONS: Answer ALL Questions

- Q1. a) Using suitable illustrations.
- i Explain briefly the terms
 - a) Income and substitution effects of a price change. **(1 mark)**
 - b) Engel curve. **(1 mark)**
 - c) Imperfect substitution. **(1 mark)**
 - ii Distinguish clearly between the terms “change in quantity, demanded” and “change in demand” **(1 mark)**
- b) Explain briefly the two basic models of individual demand. **(2 marks)**
- c) The supply of automobile industry is given by the function.
- $$Q = 2,000P - 500Px - 100,000W - 15,000S - 125,000E - 1,000,000i$$
- Where
- Q = Number of new domestic (in millions) supplied per year.

P = price (in \$) of new domestic cars

Px = price of labour per hour (in \$)

W = Price of labour per hour (in \$)

S = price of steel per ton (in \$)

E = price of energy (in \$)

i = Price of capital (in percent)

Required:

Clearly interpret the results depicted in the supply function. **(1 mark)**

- d) The following table presents the utility function of a consumer for goods (y) and services (x)

Y	X									
	1	2	3	4	5	6	7	8	9	10
1	25	36	46	55	63	70	76	81	85	88
2	37	48	58	67	75	82	88	93	97	100
3	47	58	68	77	85	92	98	103	107	110
4	55	66	76	85	93	100	106	111	115	118
5	62	73	83	92	100	107	113	118	122	125
6	68	79	89	98	106	113	119	124	128	131
7	73	84	94	103	111	118	124	129	133	136
8	77	88	98	107	115	122	128	133	137	140
9	79	90	100	109	117	124	130	135	139	142
10	80	91	101	110	118	125	131	136	140	143

Required to:

- i Compute the set of market baskets for each of the following levels of utility
 $U_1 = 85$, $U_2 = 107$, $U_3 = 118$ **(1 ½ marks)**
- ii Given the prices $P_y = \$100$ per unit of y $P_x = \$50$ per unit of x determine the minimum budget necessary to achieve each level of utility in (i) above. **(3 marks)**
- iii Generate the total utility and marginal utility for

X = 6 (1 mark)

Y = 9 (1 mark)

iv Present graphically the market baskets in (i) above. (1 ½ marks)

Q2. a) Explain briefly the statements “profits vary among firms” (3 ½ marks)

b) Explain briefly the factors that determine the nature and scope of managerial economics. (1 ½ marks)

c) Using suitable illustrations explain briefly managerial economics as an important tool for improving management decision making. (2 marks)

d) Explain briefly the importance of the expected value maximization model of the firm. (4 marks)

e) Market Inc. is a supplier of Math coprocessors (computer chips) used to speed up the processing of data for analysis on personal computer. Based on an analysis of monthly cost and output data, the company has estimated the following relation between the marginal cost of production and monthly output.

$$MC = \text{Kshs } 100 + \text{kshs } 0.004Q$$

Required:

i Calculate the marginal cost of production at 2,500, 5,000 and 7,500 units of output. (1 ½ marks)

ii Express output as a function of marginal cost. (1 mark)

iii Calculate the level of output for MC: kshs 100, kshs 125 and kshs 150 (1 ½ marks)

Q3. a) Explain briefly the “entry/mobility and exit conditions” as one of the factors that shape competitive environment. (3 marks)

b) When the level of risk and attitude towards risk taking are known, the effects of uncertainty can be directly reflected in the basic valuation model of the firm. Explain this statement clearly. (3 ½ marks)

c) i Explain briefly the term “marginal revenue product” (1 mark)

ii Assume each unit of output for a simple one-factor production system is ksh 25 complete the following table

Unit of input (L)	Total product of L (Q)	Marginal product of L $MPL = \frac{\partial Q}{\partial L}$	Marginal revenue product of L $MRPL = MPL * \text{price}$
1	5		
2	9		
3	12		
4	14		
5	15		

- iii Suppose the input L is amount of labour such that marginal cost of labour is ksh 60. How many units of labour should be hired by a profit maximizing firm? **(1 mark)**
- d) Explain briefly the following terms
- i Returns to scale of a production system. **(1 mark)**
- ii Returns to a factor of production. **(1 mark)**
- e) i State the applications of the elasticity concept. **(1 ½ marks)**
- ii Distinguish between “point elasticity” and “ arc elasticity” **(2 marks)**
- Q4. a) Explain briefly the important steps in the specification of the regression model. **(3 marks)**
- b) Using suitable illustrations, explain briefly the effect of transportation costs on the minimum efficient scale (ie optimal plant size.) **(4 marks)**
- c) In forecasting procedures
- i State the FOUR commonly applied forecasting techniques. **(2 marks)**
- ii List the THREE models used in trend analysis. **(1 ½ marks)**
- d) Using suitable illustrations, indicate the basic time-series characteristics. (3 marks)
- e) Explain briefly the term “risk measurement” **(1 ½ marks)**

END