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# SCHOOL OF ACCOUNTING AND BUSINESS BSc. (APPLIED ACCOUNTING) GENERAL / SPECIAL DEGREE PROGRAMME

# **END SEMESTER EXAMINATION – JANUARY 2017**

## **BEC 30325 Managerial Economics**

| Date     | : | 28th January 2017                        |
|----------|---|--|
| Time     | : | 1.00 p.m 3.30 p.m.                       |
| Duration | : | Two and a half (02 $\frac{1}{2}$ ) hours |

# **Instructions to Candidates:**

- This paper consists of <u>Three (03)</u> sections. (A, B and C)
  - Section A- Answer <u>ALL</u> questions in the sheet provided
  - Section B- Answer only **Four (04)** questions.
  - Section C- Answer only <u>One (01)</u> question.
- The total marks 100.
- The marks for each question are shown in brackets.
- Statistics tables are provided.
- Answers should be written neatly and legibly.

## Section A

This section consists of Ten (10) multiple choice questions. Select the best answer and mark the answers in the answer sheet provided.

## Question No. 01

- 1. Which of the following is a factor that affects coefficient of own price elasticity of demand?
  - a. Price of level of the own product
  - b. Availability of substitutes
  - c. Consumer's income
  - d. Consumer's wealth
- 2. The Durbin-Watson statistic is used to detect;
  - a. heteroskedasticity
  - b. multicolinearity
  - c. homoskedasticity
  - d. autocorrelation
- 3. The coefficient of determination of a model;
  - a. shows whether the variation in the independent variable is explain by the variation in the dependent variable.
  - b. tests the significance of independent variables.
  - c. shows the proportion of the total variation in the dependent variable that is explain by the variation in the independent variable.
  - d. is a number that tests for autocorrelation in the residual from a statistical regression analysis.

- 4. Which of the following is known as a quantitative forecasting technique?
  - a. Observational research
  - b. Consumer clinics
  - c. Regression analysis
  - d. Market experiments
- 5. The main objective of demand forecasting is;
  - a. profit maximization
  - b. utility maximization
  - c. reduce risk and uncertainty
  - d. cost minimization
- 6. Optimal use of the labour in the short run occurs when,
  - a.  $MP_L = MRC_L$
  - b.  $MP_L = MR$
  - c.  $(MP_L)(MR) = TC$
  - d.  $(MP_L)(MR) = \triangle TC / \triangle L$
- 7. Economies of scope exists when;
  - a. the cost of purchasing two products jointly is less than the cost of purchasing those two products separately.
  - b. large firms take advantages by negotiating favorable prices as a result of buying bulk raw materials.
  - c. large firms take advantages of large scale products that result in lower average cost.
  - d. firms using more than one machine of different capacities more efficiently.
- 8. The total increase in costs for implementing a particular managerial decision is known as,
  - a. irrelevant cost
  - b. incremental cost
  - c. implicit cost
  - d. economic cost

- 9. Which of the following statement is correct about the perfect competitive market structure?
  - a. In the long run equilibrium, every firm in a perfectly competitive industry earns economic profit.
  - b. In competitive market, P > MC at the profit maximization output level.
  - c. Firm's individual demand curve is represented through a horizontal demand curve
  - d. Perfect competition exists in a market when all firms are price makers as opposed to price takers.
- 10. Which of the following is a model of oligopoly market structure?
  - a. Price discrimination
  - b. Price leadership
  - c. Product differentiation
  - d. Collusive oligopoly

(Total 20 Marks)

#### Section B

#### Answer only four (04) questions

#### **Question No. 02**

i. A manager decides to direct some of the executive level subordinates to enroll in a diploma in managerial economics. As a student who studies managerial economics, define its scope and explain its relevance for managers.

(4 marks)

ii. Briefly explain the theory of the firm and list down three alternative theories to it.

(3 marks)

iii. Senouk is currently reading for his bachelor's degree in Accounting and Finance. He has the option of engaging in an internship programme for three months, where he could earn Rs.10000 per month. For all three months he will have to spend Rs. 9000 for travelling. If he was to reject the internship opportunity he can conduct online marketing for a particular product and is able to earn an extra income of Rs. 4000 per month. For internet based marketing he has to incur Rs.1000 as monthly charges. Compute Accounting profit and economic profit of doing the internship.

(4 marks)

iv. The total revenue function and the total cost function of a firm are given below. Calculate the profit maximizing output level and the profit of the firm at this output level.

 $TR = 0.3Q^2 + 12Q + 840$ TC = 36Q + 50

(4 marks)

i. Discuss the use of income elasticity of demand in business decision making.

(4 marks)

ii. The demand equation for Moonlight soap is given as follows;

$$D_M = 85 - 4P_M + 5Pc + 2Y$$

Where:

 $D_M$  is the demand for Moonlight in number of soap bars

 $P_M$  is the price of a Moonlight soap bar in rupees

Pc is a price of a related product in rupees

Y is the average income level of households in rupees thousands.

a. Compute price elasticity of demand at the point where quantity demanded is 80 and price of a Moonlight soap bar is Rs.60.

(2 marks)

b. Based on the calculation in part a, state whether the price of soap should be increased or decreased in order to increase revenue of the firm.

(2 marks)

c. How will the demand for Moonlight soap change if the price of good C decreases?

(2 marks)

d. Is Moonlight soap a normal good or an inferior good? Explain.

(2 marks)

iii. Explain three qualitative demand forecasting techniques commonly used by mangers.

(3 marks)

i. Elaborate on the short run and long run differences with respect to theory of cost and production and highlight its importance to managers.

(4 marks)

ii. Illustrate graphically the three stages of production in the short run. What is the optimum stage to stay for a rational producer?

(4 marks)

iii. The following table provides data on Labour inputs and the total output for a particular product. If the price of a final output is Rs. 4 and the wage rate per labour unit is Rs. 32, find out the optimum level of labour inputs.

| Labour Units | Output |
|--------------|--------|
| 0            | 0      |
| 1            | 12     |
| 2            | 22     |
| 3            | 30     |
| 4            | 36     |
| 5            | 40     |
| 6            | 42     |

(3 marks)

- iv. Answer the following questions.
  - a. Explain the long run producer's equilibrium by using a diagram.
  - b. What are the different types of iso-quants?

(4 marks)

i. "In today's dynamic and uncertain business environment, strategic behavior of firms and competitor analysis become key challenges for managers." Critically evaluate this statement.

(4 marks)

 Two firms Macrosoft Inc. and Silicorn Inc. are operating in the Information Technology Industry. Firms have two strategies; develop a new software or improve existing software. The table below represents the pay-offs in terms of potential profits for each alternative strategy.

|               |             | Macrosoft Inc. |                  |  |
|---------------|-------------|----------------|------------------|--|
|               |             | Develop New    | Improve Existing |  |
|               |             | Software       | Software         |  |
|               | Develop New |                |                  |  |
|               | Software    | 40,40          | 30,60            |  |
| Silicorn Inc. | Improve     |                |                  |  |
|               | Existing    |                |                  |  |
|               | Software    | 60,30          | 20, 40           |  |

a. Find out the optimal strategies of Sillicorn Inc. and Macrosoft Inc.

(2 marks)

b. Do they have a dominant strategy each? If so what are they?

(2 marks)

c. What is the Nash equilibrium?

(1 mark)

iii. Identify the basic characteristics of an oligopoly market structure and briefly explain the kinked demand curve model using an appropriate diagram.

(6 marks)

- i. "It is the common belief of the industry experts that the Insurance Industry suffers from the problem of Asymmetric information."
  - a. Explain the difference between adverse selection and moral hazard in insurance industry.

(2 marks)

b. Explain how adverse selection and moral hazard can be reduced in insurance industry.

(2 marks)

ii. Transfer pricing plays a key role in certain types of business organizations, while it may be completely irrelevant to some organizations. Define transfer pricing and explain using examples, what type of business organizations use transfer pricing.

(3 marks)

iii. Explain Positive and Negative externalities using diagrams.

(4 marks)

iv. Explain two key types of government intervention, with respect to negative externalities.

(4 marks)

## Section C

# Answer only **one** (**01**) question

### **Question No. 07**

Cilon Beverages PLC. is presently conducting an analysis on the demand of their top selling soft drink product SodaC. The following shows the summary output of SodaC's demand function, which has been estimated using the data. You are required to write a report to the manager of this company by highlighting important factors which affect demand of SodaC.

| SUMMARY O             | UTPUT        |              |          |          |              |            |
|-----------------------|--------------|--------------|----------|----------|--------------|------------|
| Regression Statistics |              |              |          |          |              |            |
| Multiple R            | 0.70955      |              |          |          |              |            |
| R Square              | 0.703461     |              |          |          |              |            |
| Adjusted R            |              |              |          |          |              |            |
| Square                | 0.650359     |              |          |          |              |            |
| Standard              |              |              |          |          |              |            |
| Error                 | 2.130054     |              |          |          |              |            |
| Observations          | 40           |              |          |          |              |            |
| ANOVA                 |              |              |          |          |              |            |
|                       |              |              |          |          | Significance |            |
|                       | df           | SS           | MS       | F        | F            |            |
| Regression            | 3            | 73.60593     | 24.53531 | 25.40767 | 0.0092117    |            |
| Residual              | 26           | 72.59407     | 4.537129 |          |              |            |
| Total                 | 29           | 146.2        |          |          |              |            |
|                       |              | Standard     |          |          |              | Upper      |
|                       | Coefficients | <b>Error</b> | t Stat   | P-value  | Lower 95%    | <b>95%</b> |
| Intercept             | 48.63081     | 6.3247384    | 7.688984 | 9.2E-07  | 35.222968    | 62.038661  |
| Price of              |              |              |          |          |              |            |
| SodaC                 | -0.3035      | 0.1711745    | -4.77307 | 0.02525  | -0.6663779   | 0.0593694  |
| Advertising           |              |              |          |          |              |            |
| Expenditure           | 0.342937     | 0.1655882    | 0.071021 | 0.06489  | -0.0080947   | 0.6939678  |
| NectaC Price          | 0.23406      | 0.1393504    | 3.679653 | 0.01244  | -0.0613493   | 0.5294699  |

(Total 20 Marks)

Amasorn is the world's largest bookstore selling books online. It is the only bookstore selling books in the small island called Chirikut which is an island in Asia. The common practice of Amasorn is to sell standard Doxford dictionaries in Asia at a price lower than, in the Western countries. The two markets in Asia and Western countries can be described by the following demand equations:

| Demand equation of Asian consumers   | : $P_A = 20 - q_A$ |
|--------------------------------------|--------------------|
| Demand equation of Western consumers | : $P_W = 30 - q_W$ |
| Total Cost function of the Amasorn   | : TC = 6q + 50     |

Analyse the above scenario with respect to your knowledge on pricing strategies, by considering the points stated below.

- The pricing strategy used and conditions required for it to be successful
- Two prices charged for Asia and Western countries
- The total profits with and without this strategy

(Total 20 Marks)