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END TERM EXAMINATION

FIRST SEMESTER [B.A.(ECONOMICS)] NOV.-DEC. 2018

Paper Code: BAECO-101 ***Subject: Principles of Microeconomics***

Time : 3 Hours ***Maximum Marks :75***

Note: Attempt all questions as directed. Internal choice is indicated. All questions carry equal marks.

Q1 Attempt **any three** of the following:

(a) Is economic a science or an art? Give any two reasons.

(b) Differentiate between 'economic theory' and 'economic model' using a suitable example.

(c) Trace the indifference curve for two goods x and y, given a limited budget of a consumer. Give two reasons for the curvature?

(d) Differentiate between the 'Cardinal Utility Theory' and the 'Ordinal Utility Theory'.

(e) Trace out the AR (Average Revenue) and MR (Marginal Revenue) curve for a perfectly competitive market and a monopoly. Is there any difference between the AR and MR curves under perfect competition and that under monopoly? Give reasons.

(f) Compare and contrast micro and macro economics. Do you find any similarities between them?

Q2 Define opportunity cost. Suppose an economy produces two goods, automobile and ammunitions. Given the factor endowment, how will the economy determine the production possibilities? Explain using a suitable diagram.

OR

What is a mixed economy? Discuss the advantage and disadvantages of a modern mixed economy.

Q3 What is a budget line? Given that x and y are the consumed quantities consumed of two goods A and B, P_x and P_y are the prices of the two goods, express budget of a consumer in mathematical form. Explain using suitable diagrams how the budget line will shift when the price of good A:- (a) increases and b) decreases.

OR

Who introduced the concept of elasticity? Explain the different types of elasticity of demand with suitable diagram and equations. Differentiate between point elasticity and arc elasticity of demand.

Q4 State the assumptions and limitations of the law of equi-marginal utility. What are the applications of this law in Economics?

OR

What is a production function? How does a long-run production function differ from a short-run production function? Use suitable diagrams to illustrate your answer.

Q5 What do you mean by perfect competition? What are the characteristics of a perfectly competitive market? Explain the consumer's equilibrium and show how a firm cannot earn supernormal profit in a perfectly competitive market.

OR

What are the characteristic of a monopoly market? Obtain the consumer's equilibrium and show how a monopolist can earn supernormal profit.

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END TERM EXAMINATION

FIRST SEMESTER [BA(ECONOMICS) HONS.] NOVEMBER-DECEMBER 2018

Paper Code: BAECO-103 ***Subject: Statistical Methods-I***

Time: 3 Hours ***Maximum Marks: 75***

Note: Attempt all questions as directed. Internal choice is indicated. All question carry equal marks.

Q1 (a) 'A correlation coefficient of r = 0.8 indicates a relationship as close as r = 0.4". Is this correct? Explain.

(b) When do we say that a system is skewed? Mention its conditions.

(c) What are random variables? Explain their features.

(d) Explain Bayes' theorem. What are its applications?

(e) Explain the meaning of marginal distribution. How is it different from conditional distribution?

Q2 The weekly wages earned by one hundred workers of a factory are set out in the following table:

Weekly Wages (Rs.)	No. of Workers
12.5-17.5	12
17.5-22.5	16
22.5-27.5	25
27.5-32.5	14
32.5-37.5	13
37.5-42.5	10
42.5-47.5	6
47.5-52.5	3
52.5-57.5	1

(a) Calculate the three quartiles of the given distribution.

(b) Find the absolute measure of dispersion based on quartiles.

(c) Interepret all measures calculated in (a) and (b) above.

OR

What is Spearman's rank correlation coefficient? How is it computed? When can it be applied? Also mention how is it different from Karl Pearson's coefficient of correlation?

Q3 (a) A pizza shop found 75% of all customers use tomato sauce, 80% use a special sweet sour preparation called 'Punch' and 65% use both when ordering a pizza. What is the probability that a customer will use at least one of these?

(b) A bag contains 10 red, 5 white and 4 blue balls. If 4 balls are drawn at random. What is the probability that-

(i) all balls drawn are white?

(ii) two are red and two are blue

(iii) two red, one white and one blue ball

OR

Define 'Probability' and explain briefly the approaches of it? Are these approaches contradictory? Also mention the applications of probability in business.

P.T.O.

BAECO-103

P1/2

Q4 (a) What is Probability Density Function (PDS)? What is its formula? Explain it with the help of an example.

(b) Find the constant c such that the function-

$$f(x)=\begin{cases} cx^2 & 0<x<3 \\ 0 & otherwise \end{cases}$$

is a density function, and also compute P(1<x<2).

OR

(a) The average travel time to a distant city is 'C' hours by car or b hours by bus. A woman cannot decide whether to drive or take the bus, so she tosses a coin, what is her expected travel time?

(b) Distinguish between univariate and bivariate distribution.

Q5 X and Y are two jointly continuous random variables with joint PDF

$$f_{XY}(x,y)=\begin{cases} 2 & y+x\le 1,\quad x>0,\quad y>0 \\ 0 & otherwise \end{cases}$$

Find Cov (X, Y) and correlation (X, Y).

OR

Suppose that 2 batteries are randomly chosen without replacement from the following group of 12 batteries:
3 new, 4 used (working) and 5 defective:
Let x denote the number of new batteries chosen, y denote the number of used batteries chosen. Find:

(a) $f_{XY}(x,y)$
{i.e. the joint probability distribution}.

(b) Also find E(X)

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END TERM EXAMINATION

FIRST SEMESTER [B.A. (ECONOMICS)] NOVEMBER-DECEMBER 2018

Paper Code: BAECO 105 ***Subject: Mathematical for Economics-I***

Time : 3 Hours ***Maximum Marks :75***

Note: Attempt any five questions. All questions carry equal marks.

Q1. Given two subsets X and Y of a universal set U, prove that

a) $\overline{X \cap Y} = \overline{X} \cup \overline{Y}$

b) $X \subseteq Y$ *implies* $\overline{Y} \subseteq \overline{X}$

c) X- Y $\subseteq X \cup Y$

d) $X \cap Y = \phi$ implies Y $\cap \overline{X} = Y$

Also, illustrate each case on a Venn Diagrams.

1,20,000

Q2. The consumption set of a consumer is $C = \{(x, y) \in R^2 +; \begin{matrix} x \geq x' \geq 0, \\ y \geq y' \geq 0 \end{matrix}\}$.

Illustrate this set. Is it Closed? Bounded? Convex?

Q3. Using the properties of sequences;

a) If limit $n_{\to\infty} \frac{1}{n} = 0$, find the limit of the sequence $f(n) = \frac{2}{n}$, n= 1, 2, 3,....

b) If $\lim_{n\to\infty} \frac{1}{n} = 0$ and $\lim_{n\to\infty} \frac{1}{(n+1)} = 0$, find the limit of the sequence

$f(n) = \frac{2n+1}{n^2+n}$, n= 1, 2, 3....

$\bar{X} \to$ Y-X∩Y

$\bar{Y} \to$ X-X∩Y

$\bar{X} \cup \bar{Y} \to$ Y+Y-2X

c) If $\lim_{n\to\infty}$, find $\lim_{n\to\infty} \frac{n}{2}$.

Q4. Let $y=x^2$ be a production function relating input x to output y. Let $\bar{C}$ represent the unit cost of input x, and assume that total cost equals fixed costs, C_o, plus cost of input x. Let $\bar{p}$ be the unit price of y.

1,2

1,2,3

a) Find the revenue function, cost function, and the profit function of the firm. 1,2,3

b) Given that the function f(x)= x^2 is continuous, are these functions continuous?

Q5. Obtain the profit function of a firm that produces three types of output using three inputs.

The output vector is given by $q = \begin{bmatrix} 2{,}000 \\ 3{,}000 \\ 6{,}000 \end{bmatrix}$ price per unit of output vector is given by P= $\begin{bmatrix} 10 \\ 15 \\ 20 \end{bmatrix}$.

(10, 15, 20) $\begin{pmatrix} 2000 \\ 3000 \\ 6000 \end{pmatrix}$

P.T.O.

TR − TC ⇒ Profit BAECO-105 P1/2 TR.

Input vector is given by $z = \begin{bmatrix} 2{,}000 \\ 2{,}500 \\ 2{,}000 \end{bmatrix}$ and price per unit of input vector is given by

$$w = \begin{bmatrix} 5 \\ 10 \\ 15 \end{bmatrix}.$$

Q6. Consider the following closed economy IS-LM model:

$C = 15 + 0.8(Y - T)$

$T = -25 + 0.25\,Y$

$I = 65 - R$

$G = \overline{G}$

$L = 5\,Y - 50\,R$

$M = 1{,}500$

where C= consumption, Y= income, T= Taxes, I= Investment, R= Interest Rates, G= Government Expenditure , $\overline{G}$ = Constant, L= Money Demand, M= Money supply. Using Cramer's rule, solve for equilibrium level of consumption (C), Investment (I) and Income (Y).

Q7. a) Use determinants to determine whether a unique solution exists for the following system of equations.

$4x_1 + 2x_2 + 6x_3 = 28$

$3x_1 + x_2 + 2x_3 = 20$

$10x_1 + 5x_2 + 15x_3 = 70$

Discuss the linear dependency conditions, if any.

b) The equilibrium condition for two related markets (tea and coffee) are given by

$18P_t - P_c = 87$

$-2P_t + 36P_c = 98$

where P_t and P_c are the prices of tea coffee, respectively. Find the equilibrium price for each market using matrices.

Q8. Construct a matrix with the required property or say why that is impossible.

a) Column space contains $\begin{bmatrix} 1 \\ 2 \\ -3 \end{bmatrix}$ *and* $\begin{bmatrix} 2 \\ -3 \\ 5 \end{bmatrix}$, null space contains $\begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix}$.

b) $Ax = \begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix}$ has a solution and $A^T \begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$.

c) Every row is orthorgonal to every column [A is not a zero matrix].

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END TERM EXAMINATION

FIRST SEMESTER [B.A. (ECO) HONS.)] NOVEMBER-DECEMBER 2018

Paper Code: BAECO-107	***Subject: Business English-I***
Time: 3 Hours	***Maximum Marks: 75***

Note: Attempt all questions as directed. Internal choice is indicated.

Q1 Write short notes. **Attempt all parts:** **(5x3=15)**

(a) Obstacles in being an effective reader.

OR

Importance of Non-verbal language in business communication

(b) Salient features of an effective e-mail

OR

Significance of Gender-neutral language

(c) Difference between 'Letter of Enquiry' and 'Letter of Complaint'

OR

Informal Communication and its utility

Q2 Explain the process of communication and describe the barriers to effective communication. **(15)**

OR

Explain the role of Intercultural communication in today's business scenario. How will you overcome the stereotypes and prejudices?

Q3 **Attempt both parts:**

(a) Imagine that you are planning to organize Gender Sensitisation Week in your campus by holding lectures, panel discussions and cultural performances. Write a letter to your Principal/Dean requesting for permission and necessary arrangements. **(10)**

(b) What is the difference between Letter and Memorandum **(5)**

OR

Attempt both parts:

(a) Your college is planning to orgnise a ten day educational tour to Assam. Write a notice in this regard. Imagine the relevant details. **(5)**

(b) Correct the following sentences if required: **(10)**

1. A large number of peoples gathered to greet the Prime Minister.
2. She is superior than me in rank.
3. Meet my older brother.
4. Listen the song, friends.
5. Professor Ram oftenly visited my libratory.
6. Despite of my leg injury, I could finish the race.
7. The student as well as the mentor are unaware of the latest policy
8. I am loving it.
9. The gardener has planted a few trees yesterday.
10. One of my friends have shifted to Rohtak.

P.T.O.

Q4 **Attempt both parts:** **(7.5x2=15)**

(a) Importance and use of effective body language

(b) Effective use of Power Point presentation

OR

Attempt all parts: **(5x3=15)**

(a) Advantages of effective listening

(b) Types of listening

(c) Role of Humour and Courtesy in an effective presentation

Q5 **Attempt both parts:**

(a) Describe the importance of 'audio-visual aids' in an effective presentation. **(10)**

(b) Choose the correct option: **(5)**

1. I am not at all interesting/interested in the deal.
2. Reema worked hardly/hard to achieve the target.
3. He broke the stone by/with a hammer.
4. Beside/besides being praised, he was given some money.
5. Don't worry, I've a few/few friends who may help me.

OR

Attempt both parts:

(a) Write a paragraph in around 250 words on the topic 'Youth and Nationalism'. **(8)**

(b) Do as directed: **(2)**

1. Give synonyms:
   i. Envisage
   ii. Wicked
2. Give antonyms: **(3)**
   i. Knave
   ii. Modest
   iii. Restore
3. Make sentences with the following pairs of words to clarify their meaning: **(2)**
   i. Judicial, Judicious
   ii. Course, Coarse

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