G 3484

00003484

Reg. No.....

Name.....

B.A. DEGREE (C.B.C.S.S.) EXAMINATION, JUNE 2026

Fifth Semester

B.A. Economics

Core Course—QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS

(2014–2016 Admissions—Mercy Chance)

[For Private Registration Candidates]

Time : Three Hours Maximum Weight : 25

Instructions : *This question paper contains* **two sections**. *Answer* **Section I** *questions in the answer book provided.* **Section II Internal Examination** *questions must be answered in the* **question paper** *itself. Follow the detailed instructions given under* **Section II**.

Section I

Part A (Objective Type Questions)

Answer **all** *questions in this part.*
Each bunch of **four** *questions carries a weight of* 1.

I. Choose the correct answer :

1 If ($y = 2x + 5$), the value of (y) when ($x = 3$) is :

(A) 8. (B) 9.

(C) 11. (D) 12.

2 The union of two sets A and B contains :

(A) Only elements common to A and B.

(B) Elements belonging to A or B or both.

(C) Elements outside A and B.

(D) Only elements of A.

3 Two matrices can be added only when they have :

(A) Same determinant.

(B) Same order.

(C) Same diagonal elements.

(D) Same number of elements in each row only.

4 The base year index number is usually assigned a value of :

(A) 0. (B) 1.

(C) 10. (D) 100.

II. 5 If the determinant of a square matrix is zero, the matrix is :

(A) Non-singular. (B) Singular.

(C) Identity. (D) Diagonal.

6 Fishers Ideal Index is the :

(A) Arithmetic mean of Laspeyres and Paasche indices.

(B) Geometric mean of Laspeyres and Paasche indices.

(C) Harmonic mean of the two indices.

(D) Difference between the two indices.

7 CPI stands for :

(A) Consumer Price Index.

(B) Capital Price Indicator.

(C) Cost Production Index.

(D) Consumer Production Indicator.

8 Which of the following methods is most appropriate for identifying the long-term movement in annual GDP data ?

(A) Moving average.

(B) Trend analysis.

(C) Simple frequency distribution.

(D) Set intersection.

III. 9 Laspeyres price index uses :

(A) Current-period quantities as weights.

(B) Base-period quantities as weights.

(C) Average quantities as weights.

(D) No weights.

10 If the price of a commodity rises from Rs. 20 to Rs. 25, the simple price relative is :

(A) 80. (B) 100.

(C) 125. (D) 150.

11 Long-term movement in a time series is called :

(A) Seasonal variation. (B) Trend.

(C) Irregular variation. (D) Cyclical variation.

12 A Fisher price index is preferred as an ideal index because it :

(A) Uses only base-year quantities.

(B) Uses only current-year quantities.

(C) Satisfies both time reversal and factor reversal tests.

(D) Does not require prices.

IV. Fill in the blanks :

13 The slope of the linear equation ($y = 5 + 3x$) is ————.

14 If a universal set contains 50 elements and A contains 30 elements, then the number of elements in (A') is ————.

15 A matrix having the same number of rows and columns is called ————.

16 An index number of 125 indicates that the measured variable has increased by ———— %.

($4 \times 1 = 4$)

Turn over

Part B (Short Answer Questions)

Write a short note on any **five** *questions, not exceeding* 50 *words each.*
Each question carries a weight of 1.

17 Primary and secondary data.

18 Pie diagram.

19 Variables and constants.

20 Venn diagrams.

21 Components of time series.

22 Population and sample.

23 Steps in tabulation of data.

24 Quadratic functions.

$(5 \times 1 = 5)$

Part C (Short Essays)

Write short essays on any **four** *questions, not exceeding* 150 *words each.*
Each question carries a weight of 2.

25 Describe sampling. Explain various sampling techniques.

26 Define a function. Examine various economic functions.

27 Let A = {1, 2, 3, 4} and B = {3, 4, 5, 6}. Find $A \cup B$ and $A \cap B$.

28 Examine various problems in the construction of index numbers.

29 Describe matrices. Examine various types of matrices.

30 Explain family budget method of the construction of index numbers.

$(4 \times 2 = 8)$

Part D (Long Essays)

Answer any **two** *questions, not exceeding* 300 *words each.*
Each question carries a weight of 4.

31. Describe index numbers. Explain various types of index numbers and various uses of index numbers.

32. Fit a time series trend for the population data (in Millions) using the method of semiaverages.

Year	:	1980	1981	1982	1983	1984	1985	1986
Population	:	412	438	446	454	470	483	490

33. Calculate Laspeyres's and Paasche's index numbers for the following data :

Commodity	*Price*		*Quantity*	
	2002	2010	2002	2010
A	12	14	18	16
B	15	16	20	15
C	14	15	24	20
D	12	12	29	23

(2 × 4 = 8)