E 8495   (Pages : 4)   Reg. No..............................

Name..................................

B.A. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2014

Fifth Semester

Core Course—QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS

Time : Three Hours   Maximum Weight : 25

Answer may be written **either** *in English* **or** *in Malayalam.*

Part A (Objective Type Questions in Bunches of 4)

Choose the correct answer alphabet only.

Weight 1 each.

I. 1 Data are classified on the basis of locational differences between the various items is known as :

    (a) Qualitative classification.   (b) Quantitative classification.

    (c) Geographical classification.   (d) Chronological classification.

    2 The number of observations corresponding to a particular class is :

    (a) Power set.   (b) Universal set.

    (c) Frequency.   (d) Union set.

    3 Bar diagrams are ———— dimensional diagrams.

    (a) One.   (b) Two.

    (c) Three.   (d) Four.

    4 Data originally collected for an investigation is known as :

    (a) Primary data.   (b) Secondary data.

    (c) Published data.   (d) Un published data.

II. 5 The set of all elements which belong to either A or B or both is denoted by :

    (a) $A \cap B$.   (b) $A \cup B$.

    (c) $A^C \cap B^C$.   (d) $A^C \cup B^C$.

    6 Choose the correct equation from the following :—

    (a) $A \cup S = A$.   (b) $A \cup S = S$.

    (c) $A \cap S = S$.   (d) $A \cup \phi = \phi$.

Turn over

7 The order of the matrix $A = \begin{bmatrix} 2 & 4 & 6 \\ 3 & 5 & 1 \end{bmatrix}$ is :

   (a) 2×3.   (b) 3×2.

   (c) 3×3.   (d) 2×2.

8 A quantity which can assumed any one of the values from a range of possible values is :

   (a) Constant.   (b) Variable.

   (c) Independent variable.   (d) Dependent variable.

III. 9 Devices for measuring differences in the magnitude of a group of related variables is :

   (a) Time series.   (b) Index Numbers.

   (c) Continuous series.   (d) Discrete series.

10 Laspeyer's price Index Number is :

   (a) $\dfrac{\Sigma p_1 q_0}{\Sigma p_0 q_0} \times \dfrac{\Sigma p_1 q_1}{\Sigma p_0 q_1}$.   (b) $\dfrac{\Sigma p_1 q_0}{\Sigma p_0 q_0} \times 100$.

   (c) $\dfrac{\Sigma p_0 q_0}{\Sigma p_1 q_0} \times 100$.   (d) $\dfrac{\Sigma p_0 q_0}{\Sigma p_1 q_0} \times \dfrac{\Sigma p_0 q_1}{\Sigma p_1 q_1} \times 100$.

11 The aggregate of prices of all the commodities in the current year is expressed as a percentage of the aggregate of prices in the base year is called :

   (a) Simplex method.   (b) Simple aggregative method.

   (c) Linear method.   (d) Weighted average method.

12 An Index number which satisfies both time reversal test and factor reversal test is :

   (a) Laspeyer's Index Number.   (b) Fisher's Index Number.

   (c) Paasche's Index Number.   (d) Kelley's Index Number.

IV. 13 The set of observations taken at specified times at equal intervals is :

   (a) Index Number.   (b) Time series.

   (c) Geometric series.   (d) None of these.

14 Changes that have occurred as a result of general tendency of the data to increase *or* decrease is :

   (a) Seasonal variations.   (b) Secular movements.

   (c) Cyclical variations.   (d) Irregular.

15 For measuring trend we use :

    (a) Simple aggregative method.   (b) Semi-average method.

    (c) Weighted aggregative method.   (d) Average relative method.

16 A lockout in a factory for a month is associated with the component of time series :

    (a) Trend.   (b) Seasonal variation.

    (c) cyclic variation.   (d) Irregular variation.

                                                               $(4 \times 1 = 4)$

Part B (Short Answer Questions)

*Answer any **five** in not exceeding 50 words.*
Each question carries 1 weight.

17 What is meant by sampling ?

18 Explain chronological classification ?

19 Explain arithmetic progression with an example ?

20 Represent $A \cup B$, $A \cap B$ and A_C by means of Venn diagram ?

21 Explain two uses of index numbers.

22 Write a short note on Histogram ?

23 Explain cyclic variation.

24 Write down the merits of free hand curve method ?

                                                               $(5 \times 1 = 5)$

Part C (Short Essays)

*Answer any **four** in not exceeding 150 words each.*
Each question carries 2 weight.

25 What is the importance of classification in a statistical investigation ?

26 Draw a simple bar diagram for the following data :

Year	:	1950-51	1960-61	1970-71	1980-81	1990-91
Production in tonnes	:	51	82	108	130	176

27 Explain the various steps in the formation of frequency table.

28 Using the following sets $A : \{1, 2, 3, 4\}$ $B = \{3, 4, 5, 6\}$ show that (a) Union is commutative.

    (b) Intersection is commutative ?

29 Explain the components of a time series briefly ?

30 Draw a pie diagram to represent the distributions of a certain blood group 'O'+ve among gypsies. Indians and Hungarians ?

Blood group	Gypsies	Indians	Hungarians	Total
O +ve	343	313	344	1000

(4 × 2 = 8)

Part D (Long Essays)

*Answer any **two** in not exceeding 450 words each.*
Each question carries 4 weight.

31 Obtain trend value by Free Hand curve method for the following data :

Year	:	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Value	:	45	58	62	50	70	72	68	70	78	75

32 Draw a less than ogive and greater than ogive for the data and obtain median from the graph ?

Marks		Frequency
0 - 10	...	4
10 - 20	...	6
20 - 30	...	10
30 - 40	...	8
40 - 50	...	2

33 Explain the various methods used for the construction of Index numbers ?

(2 × 4 = 8)