E 1705 (Pages : 4) Reg. No.....

Name.....

B.A. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2015

Fifth Semester

B.A. Economics

Core Course—QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS

(2013 Admissions)

Time : Three Hours Maximum : 80 Marks

Part A (Short Answers)

Answer **all** *questions.*
Each question carries 1 *mark.*

1. Define Random sampling.
2. What do you mean by primary data ?
3. What do you mean by tabulation of data ?
4. Define statistical error.
5. Secular trend.
6. Define Column matrix.
7. What is Null set ?
8. Define index number.
9. What is Histogram ?
10. What do you mean by difference of two sets ?

(10 × 1 = 10)

Part B (Brief Answer Questions)

Answer any **eight** *questions.*
Each question carries 2 *marks.*

11. Examine the role of statistics in economics.
12. What is secondary data ? What are the sources of secondary data ?
13. Distinguish between census method and sample method.
14. What is a diagram ? Examine its limitations.

Turn over

15. Draw a frequency curve for the following data :

Class		*Frequency*
0 – 15	...	3
15 – 30	...	7
30 – 45	...	18
45 – 60	...	25
60 – 75	...	20
75 – 90	...	12
90 – 105	...	6
105 – 120	...	5
120 – 135	...	2
135 – 150	...	2

16. What is Venn Diagram ? Represent A^C by means of Venn diagram.

17. If $S_1 = \{a, b, c\}$; $S_2 = \{a, b, 3\}$, find :

(a) $(S_1 - S_2)$? $(S_2 - S_1)$.

(b) $(S_1 - S_2)$? $(S_1$? $S_2)$

18. Examine the uses of index numbers.

19. What are the components of Time Series ?

20. $A = \begin{bmatrix} 1 & 2 \\ 2 & 3 \end{bmatrix}$ $B = \begin{bmatrix} 2 & 5 \\ 3 & 1 \end{bmatrix}$ $C = \begin{bmatrix} 4 & 3 \\ 4 & 1 \end{bmatrix}$

Find (a) A (BC) ; (b) (AB) C.

21. Calculate simple index number for the following data (simple aggregative method) :

Commodity	*Price in* 1990	*Price in* 1995
A	90	95
B	40	60
C	90	110
D	30	35

22. Explain demand function and supply function.

(8 × 2 = 16)

Part C (Short Essays)

Answer any **six** *questions.*
Each question carries 4 *marks.*

23. Describe the various steps that are taken in conducting a statistical survey.

24. What are the merits and limitations of a diagrammatic representation of statistical data ?

25. Prepare a Histogram and a frequency polygon from the following data :

Class	*frequency*
0 – 6	4
6 – 12	8
12 – 18	15
18 – 24	20
24 – 30	12
30 – 36	6

26. Discuss the various methods of collecting primary data.

27. Examine the properties of real numbers.

28. Calculate Fisher's Index Number for the data given below :

Commodity	P_0	Q_0	P_1	Q_1
A	12	20	15	25
B	10	8	16	10
C	15	2	12	1
D	60	1	65	1
E	3	2	10	1

29. Draw a trend line by the method of semi-averages.

Year	:	1991	1992	1993	1994	1995	1996
Sales ('000)	:	60	75	81	110	106	120

30. Distinguish between seasonal variation, cyclical variation and secular trend.

31. Explain the concepts of ordered pairs and Cartesian product.

(6 × 4 = 24)

Part D (Essays)

Answer any **two** *questions.*
Each question carries 15 *marks.*

32. Examine the functions and limitations of statistics.

33. Classify the methods generally employed in the collection of statistical data and state briefly their respective merits and demerits.

34. From the following information, construct : (a) Laspeyre's index ; (b) Bowley's index ; (c) Marshall's index and (d) Kelley's index.

Commodity	P_0	q_0	P_1	q_1
1	15	14	18	10
2	16	18	19	15
3	19	35	25	20
4	24	39	29	30
5	21	40	25	35
6	16	31	18	25

35. What are the uses of the cost of living index number ? Calculate the cost of living index number from the following data :

Items	*Price*		*Weight*
	Base year	*Current Year*	
Food	30	47	4
Fuel	8	12	1
Clothing	14	18	3
House Rent	22	15	3
Miscellaneous	25	30	1

(2 × 15 = 30)