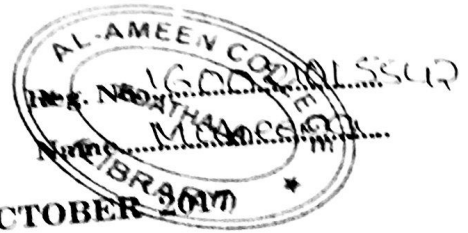


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**B.A. DEGREE (C.B.C.S.) EXAMINATION, OCTOBER 2017**

**Third Semester**

**B.A. Economics (Model II)**

**Core Course—QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS**

(2013 Admission onwards)

Maximum Marks : 80

Time : Three Hours

**Part A (Definition Type Questions)**

Answer all questions.  
Each question carries 1 mark.

Define the following :—

- |                    |                    |
|--------------------|--------------------|
| ✓1. Null set.      | ✓2. Primary data.  |
| ✓3. Population.    | 4. Function.       |
| 5. Index number.   | ✓6. Time series.   |
| ✓7. Secular trend. | 8. Range.          |
| ✓9. Matrix.        | 10. Ordered pairs. |

(10 × 1 = 10)

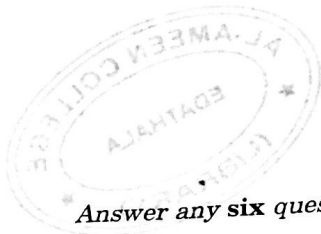
**Part B (Short Answer Questions)**

Answer any **eight** questions in a paragraph each (not exceeding 100 words).  
Each question carries 2 marks.

11. How is statistics misused ?
- ✓12. Examine the use of Statistics in Economics.
- ✓13. Distinguish between Census and Sampling.
- ✓14. Distinguish between Variable and Constant.
15. Write down the general rules for constructing diagrams.
- ✓16. Write down the merits of bar diagrams.
17. Write down two characteristics of index numbers.
18. What are weighted index number ?
19. Write down two uses of consumer price index numbers.
20. What do you mean by analysis of time series ?
21. Explain cyclic variation.
22. Write down two merits of free hand curve method.

(8 × 2 = 16)

**Turn over**



Part C (Short Essays)

Answer any six questions in one and a half pages each (not exceeding 150 words). Each question carries 4 marks.

23. Draw a histogram and frequency polygon from the following data :

Experience in months	No. of workers
5—10	5
10—15	6
15—20	15
20—25	10
25—30	5
30—35	4
35—40	2
40—45	2

24. What are the advantages of presenting data through diagrams and graphs ?

25. Define cartesian product of X and Y given  $A = \{1, 2\}$ ,  $B = \{a, b, c\}$ . Find  $A \times B$ .

26. Define function. Explain three important economic functions.

27. Calculate Laspeyzer's index and Paasche's index for the following data :

Items	Price		Quantity	
	2000	2005	2000	2005
A	4	4	3	4
B	8	7	9	10
C	2	3	6	7
D	3	4	2	3

28. How do you construct consumer price index numbers ?

29. Explain any three methods for collecting primary data.

30. (a) Define null matrix. Write down an example of null matrix of order  $2 \times 3$ .

(b) Define diagonal matrix. Give an example of diagonal matrix of order  $3 \times 3$ .

31. (a) Draw a pie diagram to the following data :—

Accident due to falling objects	8
Falls	4
Machinery	6
Fire	7
Cuts and bruises	10
Traffic	5

(b) Explain two uses of pie diagrams.

**Part D**

Answer any **two** questions not exceeding **four** pages each.  
Each question carries 15 marks.

32. Draw less than Ogive and greater than ogive for the following data and determine the value of median :

Class	Frequency
0—20 ...	5
20—40 ...	16
40—60 ...	21
60—80 ...	10
80—100 ...	6
100—120 ...	2

33. (a) Explain family budget method for the construction of consumer price index numbers.  
(b) Following are the index numbers and percentage of family budget of an average working class family. Construct cost of living index number :

Group	Index Number	% of expenditure
Food ...	152	58
Fuel ...	110	5
Clothing ...	130	10
Rent ...	100	12
Others ...	80	15

- (c) Write down three limitations of index numbers.
34. (a) Write a short note on Venn diagram.  
(b) Explain real number system.  
(c) Explain axioms of real numbers.
35. (a) Explain semi average method.  
(b) Apply the method of semi averages for determining the trend for the following data :—

Year :	2000	2001	2002	2003	2004	2005	2006	2007	2008
Values :	10	12	15	20	18	25	24	28	34

- (c) Write down three merits of this method.

(2 × 15 = 30)