B.A. DEGREE END SEMESTER EXAMINATION OCTOBER/NOVEMBER 2018

SEMESTER –5: ECONOMICS (CORE COURSE)

COURSE: **15U5CRECO07: QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS**

(Common for Regular 2016 admission & Supplementary 2015 admission)

Time: Three Hours   Max. Marks: 75

PART A

*Answer **all** questions in one or two sentences. Each question carries **1** mark*

1. Null set
2. Time series data
3. Ogives
4. Statistics
5. Consumer price index
6. Probability sampling
7. Least squares
8. Sources of secondary data
9. Real numbers
10. Census method   (1 x 10 = 10)

PART B

*Answer **any eight** of the following in three or four sentences.*

*Each question carries **2** marks.*

11. Distinguish between frequency polygon and frequency curve
12. What are the problems in the construction of Index Numbers?
13. Differentiate between Transpose of a matrix and symmetric matrix.
14. Define Cartesian product. Give an example.
15. What is the role of revenue function in Economics? The demand function of a firm is given as,
    p = 75 – 6x. Derive its total revenue function.
16. Examine the role of statistics in economic analysis
17. Distinguish between census method and sampling method.
18. State the guidelines for preparing a questionnaire
19. What is the significance of Consumer Price Index Number?
20. Solve the following equation: $2x^2 - 22x + 60 = 0$ (2 x 8 = 16)

PART C

*Answer **any five** of the following in not more than one page.*

*Each question carries **5** marks.*

21. From the time series estimate trend using 5 yearly moving averages.

Year:	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Sales:	10	11	10	14	15	16	18	18	20	21

22. Draw a histogram from the following table:

Class: 0-10   10-20   20-30   30-40   40-50   50-60   60-70
Freq: 5   14   20   24   27   18   12

23. The table gives the prices of the base year and current year of 5 commodities with their quantities. Verify whether Fisher's Ideal Index satisfies the time reversal and factor reversal tests.

Commodities	Base year		Current year	
	Unit price (Rs)	Quantity (Kgs)	Unit price (Rs)	Quantity (Kgs)
A	5	50	5	70
B	5	75	10	80
C	10	80	12	100
D	5	20	8	30
E	10	50	5	60

24. From the chain based index number given below, prepare fixed based index numbers.

Years	2004	2005	2006	2007	2008	2009	2010
CBI	95	102	104	99	107	109	110

25. What are the advantages and disadvantages of primary data?

26. What are the components of time series?

27. From the following simultaneous equations find the values of X and Y?

12X+-4Y = 12,   3X +2Y = 12   (5 x 5 = 25)

PART D

*Answer **any two** of the following in not exceeding four pages.*

*Each question carries **12** marks.*

28. Define Sampling. Explain the various Sampling techniques used in statistical investigation.

28. What is a Venn diagram? Explain the basic operations on sets with examples and also state its laws.

30. Construct an index number of business activity in India from the following data:

Items	Weights	Index
Industrial production	36	250
Mineral production	7	135
Internal trade	24	200
Financial activity	20	135
Exports and imports	7	325
Shipping activity	6	300

31. Enumerate the various methods of data collection used in Social Science Research.   (12 x 2 = 24)