K18U 0012

Reg. No. : .....

Name : .....

VI Semester B.A. Degree (CBCSS – Reg./Supple./Imp.) Examination, May 2018
CORE COURSE IN ECONOMICS/DEV. ECONOMICS
6B12ECO : Basic Tools for Economic Analysis – II
(2014 Admn. Onwards)

Time : 3 Hours Max. Marks : 40

PART – A

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

1. What are Regression equations ?
2. Distinguish between symmetric matrix and skew symmetric matrix.
3. What are index numbers ?
4. Define differentiation. **(1×4=4)**

PART – B

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

5. Total revenue function of a firm is given by $R = 100x - x^2$. Find the Marginal Revenue when 25 units are sold.
6. Give a note on Scatter Diagram.
7. What are the properties of limits ?
8. Compute the correlation coefficient for x and y for the following data :

X :	7	8	9	6	5
Y :	8	6	7	9	10

P.T.O.

9. Calculate quantity index numbers using Fishers formula.

	Price		Quantity	
Items	**2015**	**2016**	**2015**	**2016**
A	4	4	3	4
B	8	7	9	10
C	2	3	6	7
D	3	4	2	3

10. Distinguish between correlation and regression.

11. Explain Cobb-Douglas production function.

12. Differentiate $x^{\log x}$.

13. If $y = 4x^3 - 2x^2 + 8x$ find d^3y/dx^3.

14. Explain price elasticity of demand. **(2×7=14)**

PART – C

Answer **any four** questions. **Each** question carries **3** marks.

15. Examine the OLS method of estimation.

16. Explain the properties of determinants.

17. If $A = \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1 \end{bmatrix}$, show that $A^2 - 4A - 5I = 0$.

18. Explain the applications of maxima and minima in economic functions.

19. Find the total differential of $z = x/x + y$.

20. What is Rank Correlation ? What are its merits and demerits. **(3×4=12)**

PART – D

Answer **any two** questions. **Each** question carries **5** marks.

21. Explain various weighted aggregative method of price index numbers with suitable examples.

22. Explain the rules of differentiation with suitable examples.

23. Find the adjoint of the matrix $\begin{bmatrix} 1 & 1 & 1 \\ 1 & 2 & -3 \\ 2 & -1 & 3 \end{bmatrix}$ and verify the theorem $A(\text{Adj } A) = (\text{Adj } A)A = |A|I$.

24. Ten participants in a dance competition are ranked by three judges in the following order :

First Judge :	1	6	5	10	3	2	4	9	7	8
Second Judge :	3	5	8	4	7	10	2	1	6	9
Third Judge :	6	4	9	8	1	2	3	10	5	7

Use the correlation coefficient to discuss which pair of judges have nearest approach to common taste. **(5×2=10)**

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