Reg. No. : ....

Name : ....

VI Semester B.A. Degree (CBCSS – Regular) Examination, May 2017
(2014 Admn.)
CORE COURSE IN ECONOMICS/DEV. ECONOMICS
6B12ECO : Basic Tools for Economic Analysis – II

Time : 3 Hours   Max. Marks : 40

PART – A

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

1. What is splicing ?

2. Distinguish between simple and multiple regressions.

3. What is order of a determinant ?

4. Define diagonal matrix.   (1×4=4)

PART – B

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

5. Explain the sum rule of differentiation and find the differential coefficient of $3x^4 - x^3 + 6x^2 - 10x + 70$.

6. The consumer price index for April 2016 was 125. The fuel price index was 120 and other items index (excluding fuel) was 135. What percentage of the total weight of the index is given to fuel ?

7. Explain Euler's theorem.

8. Examine the different kinds of correlation.

9. What are the characteristics of an ideal index number ?

10. If the MR is 10 and the elasticity of demand with respect to price is 2, find the average revenue.

11. Find the second order derivative of $z = x^2 + 6xy + y^2$.

12. Distinguish between correlation and regression.

13. Explain price elasticity of demand.

14. Explain the operations of matrix.

(2×7=14)

PART – C

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

15. What is consumer price index ? What are the steps in the construction of consumer price index numbers.

16. From the data given below, find

    a) The two regression equations

    b) The coefficient of correlation between the marks in economics and statistics.

    c) The most likely marks in statistics when marks in economics are 30.

Marks in Economics	25	28	35	32	31	36	29	38	38	32	30
Marks in Statistics	43	46	49	41	36	32	31	30	33	39	–

17. Let $P = \begin{bmatrix} 0 & 1 \\ 2 & 3 \end{bmatrix}$, $Q = \begin{bmatrix} -1 & 2 \\ 4 & 3 \end{bmatrix}$ and $R = \begin{bmatrix} 2 & -1 \\ 6 & 5 \end{bmatrix}$. Find $P(Q + R)$ and $PQ + PR$.

18. Explain the properties of a determinant.

19. The demand function of the monopolist is $P = 15 - 2x$ and the cost function is $C(x) = x^2 + 2x + 10$. Find MC, MR, Equilibrium output, Equilibrium price and AC.

20. Examine the OLS method of estimation.

(3×4=12)

PART – D

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

21. Explain maxima and minima of functions with suitable examples.

22. Calculate Fisher's Ideal Index Number and test whether it satisfies Time Reversal and Factor Reversal tests.

Commodity	1993		1994	
	Price	Quantity	Price	Quantity
Rice	12	75	30	90
Milk	3	22.5	9	15
Firewood	1.5	30	3	37.5
Sugar	3	15	7.5	12
Cloth	1.5	60	4.5	45

23. Solve the simultaneous equations using Cramer's rule $2x - 3y = 3$ and $4x - y = 11$.

24. From the following data of the age of brother and the age of sister, from the two regression equations and calculate the brothers age when the sisters age is 14. Find the age of sister when brothers age is 45.

Brothers age :	23	27	36	28	30	35	31	33	28	29	
Sisters age :	18	20	29	27	29	28	27	29	22	21	(5×2=10)