



K17U 0989

Reg. No. :

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II Semester B.A. Degree (C.B.C.S.S. – Reg./Supple./Imp.)
Examination, May 2017
COMPLEMENTARY COURSE IN ECONOMICS
2C02 ECO : Mathematics for Economic Analysis – II
(2014 Admn. Onwards)

Time : 3 Hours

Max. Marks : 40

PART – A

Answer **all** the 4 questions. **Each** carries 1 mark.

1. A matrix in which every element is zero, is said to be *Zero Matrix*
2. The general value and particular value of integral differ only by

3. Rank of the matrix $\begin{vmatrix} 2 & 1 \\ 1 & 3 \end{vmatrix}$ is $= 2$.
2x3 - 1x1 = 6 - 1 = 5 // = 5 ≠ 0 then the Rank = 3

4. _____ of the determinant is the number of rows or columns of the determinant. (1x4=4)

PART – B

Answer **any 7** questions. **Each** carries 2 marks.

5. What is Consumer Surplus ?
6. What is minor of an element of a matrix ?

7. Show that $\begin{vmatrix} 4 & 6 \\ 2 & 3 \end{vmatrix}$ is singular.
4x3 - 6x2 = 12 - 12 = 0 //



8. $\int \frac{\sqrt{x+1}}{\sqrt{x}} dx$?

9. Explain the concepts of marginal revenue, marginal cost, total revenue and total cost.

10. What is Eigen value ?

11. Are the following two determinants equal, why ?

$$\begin{vmatrix} 2 & 3 & 1 \\ 1 & 0 & 2 \\ 4 & 2 & 3 \end{vmatrix} \text{ and } \begin{vmatrix} 3 & 2 & 1 \\ 0 & 1 & 2 \\ 2 & 4 & 3 \end{vmatrix}$$

12. Given $A = \begin{vmatrix} 1 & 4 & 2 \\ 2 & 1 & -1 \\ 1 & 2 & 1 \end{vmatrix}$ $B = \begin{vmatrix} 2 & 3 & 1 \\ 1 & 0 & 2 \\ 4 & 2 & 3 \end{vmatrix}$ $C = \begin{vmatrix} 1 & 3 & 1 \\ 1 & 0 & 1 \\ 1 & 2 & 3 \end{vmatrix}$. Determine $2(6A - 2B - 2C)$.

13. Explain with an example equality of matrices.

14. What are rules of integration ?

(2×7=14)

PART - C

Answer **any 4** questions. **Each** carries **3** marks.

15. Explain constraint optimization.

16. Explain substitution method of integration with an example.

17. Find the Rank of a matrix

$$\begin{vmatrix} 1 & 2 & 3 \\ 3 & 6 & 9 \\ 2 & 4 & 6 \end{vmatrix}$$