



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 $= 2$. $2 \times 3 - 1 \times 1 = 6 - 1 = 5 // = 5 \neq 0$ then the Rank = 3

4. _____ of the determinant is the number of rows or columns of the determinant.

(1×4=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. $4 \times 3 - 6 \times 2 = 12 - 12 = 0 //$

P.T.O.



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