MATHEMATICAL ECONOMICS-I

Mid-Term Examination, Semester IV(2018-21)

* Required

Email address *

Your email

Gender *

- Female
- Male

Contact number *

Your answer

NAME *

Your answer

Roll NO. *

Your answer

University Roll No. *

Your answer

1. Given the value of A, find 2A * 2 points

$$\begin{bmatrix} 4 & 5 & 6 \\ 2 & 3 & 1 \\ 5 & 7 & 3 \end{bmatrix}$$

$$\begin{bmatrix} 4 & 5 & 6 \\ 2 & 3 & 1 \\ 5 & 7 & 3 \end{bmatrix}$$

Option 1

$$\begin{bmatrix} 8 & 10 & 12 \\ 4 & 6 & 2 \\ 5 & 7 & 3 \end{bmatrix}$$

Option 2

$$\begin{bmatrix} 4 & 2 & 5 \\ 5 & 3 & 7 \\ 6 & 1 & 3 \end{bmatrix}$$

Option 3

None of these

2. If A and B is given then A+B will be * 2 points

$$A = \begin{bmatrix} 2 & -2 \\ -2 & 2 \end{bmatrix} \quad B = \begin{bmatrix} 2 & 2 \\ 2 & 2 \end{bmatrix}$$

- 1. Column Matrix
- 2. Row Matrix
- 3. Scalar Matrix
- 4. Null Matrix

3. Tick out the Identity Matrix * 2 points

- A $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$
- B $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$
- C $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$
- D $\begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix}$

4. Find the value of x when * 2 points

$$\begin{bmatrix} 3x & 5 \\ -2x & -9 \end{bmatrix} = 34$$

- A 2
- B -2
- C 4
- D 17

5. The value of the given Determinant is 6 * 2 points

$$\begin{bmatrix} 5 & 7 \\ 2 & 4 \end{bmatrix}$$

- True
- False

6. If A= {2,1,3}, B={2,5,7}, then A∩B is * 2 points

- A Null Set
- B Singleton Set
- C Universal Set
- D Infinite Set

7. The set of Letters used in the word 'ECONOMICS' * 2 points

- A { s,c,i,m,o,n,e}
- B { n,o,m,i,c,s}
- C {e,c,o,n,o,m,i,c,s}
- D None

8. The number of subsets of a set consisting of n elements is * 2 points

- Option 1: 2^n
- Option 2: n^n
- Option 3: n^2
- Option 4: n^{2+1}

9. A∪∅= A * 2 points

- True
- False

10. If A= {5,9,3,7} then * 2 points

- 3∈A
- 8∉ A
- 5∈A
- All of the above

11. If Demand and Supply functions of a commodity are p=28-4x and p=10+2x. Find out the consumer surplus. * 2 points

- 20
- 18
- 12
- 16

12. If demand function is p=35-2x-x^2.find out the consumers surplus when x=3 and p=20. * 2 points

- 27
- 25
- 52
- 21

13. If we know marginal profit, We can find with the help of integration * 2 points

- Total cost function
- Marginal cost function
- Average cost function
- None of these

14. If the demand function for a commodity is D=2-4p+p^2, then find the elasticity of demand at p=8 * 2 points

- -32/20
- -32/19
- -1
- None

15. Which one is not constant cost * 2 points

- Interest
- Insurance Premium
- Cost of Row Material
- Rent of factory

16. Tick the correct option * 2 points

- TFC=TVC+TC
- TC= TVC+TFC
- TC=TVC-TFC
- None

17. If y= 10^x , then dy/dx is * 2 points

- 10^x log10e
- 10^x log e10
- 10^x
- X^10

18. Cross Elasticity of Demand is equal to * 2 points

- % change in quantity demanded of good X/ % change in price of Y
- % change in price of good X/ % change in price of Y
- % change in quantity demanded of good X/ % change in quantity demanded of good Y
- None

19. Marginal Cost is equal to * 2 points

- Differentiation of Total Revenue
- Differentiation of Total Cost
- Differentiation of Total Variable Cost

20. If MR =20-2x, MC= 4+(x-4)^2. Find the profit maximizing output * 2 points

- 6
- 36
- 0
- None

21.If MR =20-2x, MC= 4+(x-4)^2. Find the profit maximum profit. * 2 points

- 6
- 0
- 36
- 60

22. Find the total variable cost for Q=12 if marginal cost function is given by MC=2-4Q+3Q^2 * 2 points

- 1474
- 1464
- 1412
- 1421

23. Find integration of 1/x^3+1/x^2 * 2 points

- -1/2x^2-1/x+c
- -1/2x^2-1/x-c
- -1/2x^2+1/x+c
- None

24. Find out equilibrium price and quantity from the following demand and supply functions given in any market; D=20-2P, S= 40-6P * 2 points

- p=5, q=10
- p=10, q=5
- p=8, q=12
- p=12, q=8

25. If in a equation 12x+17y=53 the value of y=1 then the value of x will be * 2 points

- 36
- 24
- 3
- 12

Submit