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1B1N17250 (Pages : 2) Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BA Degree Examination, November 2017

BECO1C04 – Mathematical Method for Economics

(2017 Admission onwards)

Max. Time: 1 ½ hours Max. Marks: 40

PART A
Answer *all* questions

A-Objective Type Questions

1. The smallest prime number is

   a) 0 b) 1 c) 2 d) 3

2. The value of $3\sqrt{125}$

   a) 3 b) 5 c) 2 d) 25

3. n (ϕ) =.....

   a) 0 b) 1 c) 2 d) None of these

4. The value of ' n', in equation $3x^2 - 12x + (n-5)$

   a) 3 b) 17 c) 7 d) 5

5. For set A and B, $n(A \cup B) + n(A \cap B) =$.....

   a) n(A) b) n(B) c) n(A+B) d) n(A) + n(B)

6. Value of 'x' in equation $5^{x-3} = \frac{1}{25}$

   a) 1 b) 2 c) 5 d) $\frac{1}{5}$

(6× ½ =3 Marks)

Part B (Very Short Answer Type Questions)

Answer *any six* questions

7. The product of 2 number is 20736 and their HCF is 54, find their LCM

8. Solve $10\frac{1}{2} - [8\frac{1}{2} + \{6 - (7 - 6 - 4)\}]$

9. Distinguish between domain and range of a relation.

10. if A = { 0, 1, 7, 8} and B = { 0, 1} find A x B and B x A

11. Find the value of $3\sqrt{3^3(7^6)}$

12. A man spends $\frac{2}{5}$ of his salary on food and $\frac{3}{10}$ of the remaining on house rent, electricity etc. What fraction of his salary is still left with him?

13. Find the values of 'x', if a + 1 = 0, and $x^2 + ax - 6 = 0$

14. What do you meant by Cartesian Product, Give an example for it.

(6×2=12 Marks)

Part C (Short Essay)
Answer *any Three* questions

15. In a class of 50 students, 30 plays cricket and 25 plays hockey. If each student takes part in at least one game, find using Venn diagram how many play?

a) Both games b) Only cricket

16. If $x = 2\sqrt{3+2\sqrt{2}}$ find

a) $\frac{1}{x}$ b) $x + \frac{1}{x}$ c) $(x + \frac{1}{x})^2$

17. Factorise

a) $2x^2 - 5xy - 2xy + 5y^2$ b) $2a - 4a^2 + 5b - 10ab$

18. Simplify

a) $(x^2 + x - 1)(x^2 + 4x - 5)$ b. $\frac{4x^2 - 12x + 9}{2(x+2)} \div \frac{12x^2 - 36x + 27}{3x^2 + 6x}$

(3×5=15 Marks)

Part D (Essay Questions)
Answer any *one of the followings*

19. Briefly describe the role of mathematics in economic analysis.

20. Solve the following

a) If $(a^2 + b^2)(x^2 + y^2) = (ax + by)^2$ prove that $\frac{a}{x} = \frac{b}{y}$

b) If $\frac{x}{a} = \frac{y}{b} = \frac{z}{c}$ prove that $\frac{ax - by}{(a+b)(x-y)} + \frac{by - cz}{(b+c)(y-z)} + \frac{cz - ax}{(c+a)(z-x)} = 3$

(1×10=10 Marks)

1B1N17249 (Pages : 2) Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BA Degree Examination, November 2017

BECO1B01 – Micro Economics I

(2017 Admission onwards)

Max. Time: 3 hours Max. Marks: 80

PART - A

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

1. The Engel curve for a Giffen good is:
   (a)Negatively sloped (b)Positively sloped
   (c) Vertical (d)Horizontal
2. The want satisfying power of a commodity is
   (a) Production (b)Consumption
   (c) Utility (d) Exchange
3. If the income elasticity of demand is greater than 1, the commodity is:
   (a) Necessity (b)Luxury
   (c)Inferior good (d)None of these
4. If A>B, then B>A: this assumption is called
   (a)Transitive (b)Consistency
   (c)Cardinal (d)Ordinal
5. The economist who coined the terms micro economics and macro economics.....
6. The coefficient of price elasticity of demand between two points on a demand curve is called.....
7. Opportunity cost is also called.....
8. When TP is Maximum,AP is .....
9. Define Value judgements?
10. Define MRTS?
11. Define Price Line?
12. Define Production function?

(12 x 1 = 12 Marks)

PART - B

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

13. Explain Elasticity of substitution.
14. What is Extension and Contraction in demand?
15. Distinguish between ICC and PCC?
16. What is substitution effect?
17. Define Engel curve?
18. Explain Cobb-Douglas production function..
19. Bring out the difference between demand curve and a demand schedule?
20. Define technical progress.
21. What is an economic model?

(7 x 2 = 14 Marks)

PART - C

Answer *any six* questions. Each question carries *five* marks

22. What is Income consumption curve? Derive demand curve from ICC.
23. Price of a good rises from □10 to □12 per unit as a result demand for it falls from 120 units to 100 units. Calculate the price elasticity of demand for the commodity.
24. What is price? Explain the functions?
25. Explain Revealed preference theory?
26. What is the Fundamental theorem of consumption theory?
27. Explain special types of Indifference curve.
28. Briefly explain the Producer's equilibrium?
29. What is the importance of Micro economics in the present situation?

(6x 5 = 30 Marks)

PART - D

Answer *any three* questions. Each question carries *eight* marks

30. What is Market Equilibrium? Explain the changes in Equilibrium using suitable diagrams?
31. Anlayse the decomposition of price effect into income effect and substitution effect using hicksian method?
32. What is production function? Explain different types of production function.
33. Explain the superiority of Marshalian consumer surplus approach to Hicksian approach?
34. What are the uses of elasticity of demand in economic analysis?

(3 x 8 = 24 Marks)