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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Third Semester BA Degree Examination, November 2017
ECO3B03 - Quantitative Method for Economic Analysis – I
(2016 Admission onwards)

Max. Time: 3 hours   Max. Marks: 80

PART A
Answer All Questions. Each question carries ½ marks
Multiple Choices:

1. The Range of 15,12,10,9,17,20 is ....
   - (a) 5
   - (c) 13
   - (b) 12
   - (d) 11

2. Natural logarithms are logarithms with base
   - (a) 1
   - (c) e
   - (b) 10
   - (d) 0

3. When $b^x = 1$ the value of x is
   - (a) 1
   - (c) -1
   - (b) 0
   - (d) Infinity

4. The solution of the equation 4=2/3x is
   - (a) 4
   - (b) 1
   - (b) 6
   - (d) None of these

5. Inverse of a matrix 'A' exists only when
   - (a) $|A|=0$
   - (c) AdjA=A
   - (b) $|A|\neq0$
   - (d) None of these

6. Ogives are useful to locate
   - (a) Median
   - (c) Weighted Arithmetic mean
   - (b) Mode
   - (d) Mean

7. Dispersion can also be studied graphically with the help of ....
   - (a) Lorenz curve
   - (b) Frequency polygon
   - (b) Ogives
   - (d) Histogram

8. Skewness means...................
   - (a) Lack of symmetry
   - (c) Normal curve
   - (b) Bulginess
   - (d) None of the above

9. Correlation coefficient measures................
   - (a) Variability
   - (c) Relation
   - (b) Location
   - (d) Concentration

10. Which is the best measure of Dispersion?
    - (a) Range
    - (c) MD
    - (b) QD
    - (d) SD

11. Pie chart represents the components of a factor by
    - (a) Percentages
    - (c) Sectors
    - (b) Angles
    - (d) Circles

12. Mean=18, Median=20, then Mode =..........
    - (a) 25
    - (c) 23
    - (b) 24
    - (d) 22

                                                   (12 x ½ =6 Marks)

PART B
Answer any 10 Questions. Each question carries 2 marks

13. Find the value of $\left[\frac{1}{125}\right]^{-3/2}$

14. Define Geometric mean and Harmonic mean.

15. If A = $\begin{bmatrix} 2 & 3 & 4 \\ 1 & 2 & 3 \\ -1 & 1 & 2 \end{bmatrix}$, B = $\begin{bmatrix} 1 & 3 & 0 \\ -1 & 2 & 1 \\ 0 & 0 & 2 \end{bmatrix}$ compute AB

16. What are the merits and demerits of Median?

17. Define Singular and Non singular matrix.

18. Calculate SD and CV of the numbers 5 to 15.

19. What are the properties of correlation coefficient?

20. Write a note on graphical methods of correlation.

21. Evaluate $\frac{(3.88)^2 \times \sqrt{3.38}}{15.8}$ using logarithm.

22. Mention the usefulness of measures of dispersion

23. Find the slope of the line joining points (2, 3) and (4, 9)

24. What is Frequency polygon? How will you construct it?

(10 x 2=20 Marks)

PART C
Answer any 6 Questions each question carries 5 marks

25. What are the important properties of a determinant?

26. Define Kurtosis. What are the various measures of kurtosis?

27. Briefly explain the positional averages.

28. If A = $\begin{bmatrix} 1 & 0 & -2 \\ -2 & 2 & 4 \\ 0 & 0 & 2 \end{bmatrix}$ show that A-3A+2I =0

29. Find the inverse of the matrix A = $\begin{bmatrix} 8 & 4 & 2 \\ 2 & 8 & 4 \\ 1 & 2 & 8 \end{bmatrix}$

30. What are the different types of correlation?

31. Find the equilibrium price and quantity, if the demand and supply equations are respectively, 2p =14-x and 12p =14+x.

32. Calculate Mean, Median and Mode for the following data.

Classes	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	5	15	40	32	20	8

(6 x 5 = 30 Marks)

PART D
Answer any 2 Questions each question carries 12 marks

33. Solve using crammer's rule. 2x+3y-z =9
    x+y+z = 9
    3x-y-z = -1

34. Discuss the merits and demerits of the various measures of central tendency. Which particular measure is considered as the best and why? Illustrate your answer.

35. Calculate Karl Pearson's correlation coefficient from the following data.

X	22	26	29	30	31	33	34	35
Y	19	21	22	29	27	24	27	31

36. What are the measures of Dispersion? State their merits and demerits.

(2 x12=24 Marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BA Degree Examination, November 2017
ECO3B04 - Modern Banking & Insurance
(2016 Admission onwards)

Max. Time: 3 hours   Max. Marks: 80

PART A
Answer All Questions. Each question carries ½ marks

Multiple choice questions

1.   Which of the following authority is entrusted to chalk out and implement monetary policies?

   a)   RBI   b) Central Government

   c)   IRDA   d) SEBI

2.   The oldest form of insurance is:

   a) Fire Insurance   b) Live stock Insurance

   c) Marine Insurance   d) Health Insurance

3.   Which insurance is popular to cover a policyholder against death throughout his life term?

   a) Term Insurance   b) Endowment Policy

   c) Annuities   d) Whole Life Policy

4.   The head quarter of SEBI is located at:

   a) Hyderabad   b) Mumbai

   c) New Delhi   d) Calcutta

Fill in the blanks

5.   Regional Rural Banks (RRBs) started their functions in ....

6.   .... is the simplest form of insurance that life insurance companies offer.

7.   .... is defined as the ratio of premium underwritten in a given year to the total population.

8.   .... cards are very easy to secure and useful at any time to buy something and money is deducted from our account.

Answer in a word or sentence

9.   The money market in India is come under the control of:

10.   RTGS

11.   IRDA

12.   Can you locate the headquarters of LIC?

                                                          (12x ½ = 6 Marks)

PART B
Very short answer questions
Answer any 10. Each question carries 2 marks.

13. Pradhan Mantri Jan-Dhan Yojana (PMJDY)
14. Burglary Insurance.
15. What is Consortium Banking?
16. What is Insurance Score?
17. Unit Banking
18. What is cheque truncation system?
19. NABARD
20. Define Reinsurance
21. What is General Insurance?
22. What is E-Purse?
23. Money Back Life Insurance Policy
24. What do you meant by the term 'Revival' in the insurance sector?

(10 x 2= 20 Marks)

PART C
Short Essay Type Questions
Answer Any 6 Questions. Each question carries 5 marks.

25. Discuss briefly the evolution of banking sector in India.
26. Explain the vital roles played by the insurance sector in the socio-economic development of the country like India.
27. What are the major role and functions of banking ombudsman?
28. Define money market. What are the major defects of Indian money market?
29. Bring out the major differences between life insurance policies and general insurance policies.
30. What is risk management? What are the principles and elements of good risk management?
31. Enumerate the major recommendations of Narasimham Committee Report on Banking Sector Reforms.
32. Critically examine the role of RBI as credit controller and lender of the last resort.

(6 x 5= 30 Marks)

PART D
Essay Type Questions
Answer Any 2 Questions. Each question carries 12 marks

33. Critically examine the role and functions of Insurance Regulatory and Development Authority (IRDA). Discuss the new regulatory guidelines of IRDA.
34. Explain elaborately the structure and functions of commercial banks in India.
35. What is motor insurance? Discuss the different kinds, procedure and pattern of settlement of claims of motor insurance in India.
36. What is social banking? In what ways the social banking principles help to attain the socio-economic development of the country?

(2 x 12= 24 Marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BA Degree Examination, November 2017

ECO3C04 - Mathematical Tools for Economics III

(2016 Admission onwards)

Max. Time: 1.5 hours   Max. Marks: 40

PART A

Answer *all* questions

A-Objective Type Questions

1. $\lim_{x \to 2} 10$ is

   a) 20   (b) 10   (c) 0   (d) 2

2. $\frac{d}{dx} x^{½}$ is

   (a) $½ \frac{1}{\sqrt{x}}$ (b) $\frac{1}{2\sqrt{x}}$ (c) $½ x^2$ (d)None of these

3. Fourth derivative of $5x^3$ is

   (a) 15   (b) 30   (c) 60   (d) 0

4. For a function $y=f(x)$ when $x_1 < x_2$ and $f(x_1) < f(x_2)$ then the function is

   (a) Decreasing   (b) Increasing   (c) Convex   (d) Concave

5. If $f^{II}(a) > 0$ at x=a then f(x)

   a) Increasing   b) Decreasing   (c) Concave   (d) Convex

6. Marginal revenue when revenue function is $R=20Q-Q^2$ and Q=10 is

   (a) 0   (b) 10   (c) 2   (d) 5

(6 × ½ =3 Marks)

Part B

(Very Short Answer Type Questions)

Answer *any 6* questions

7. Find the limit value of the function $f(x) = \frac{x^2 - x - 30}{x^2 - 4x - 12}$ as x approaches to 6

8. Check the continuity of the function at x=1 when $f(x) = \frac{x^2 - 3x - 4}{x - 1}$

9. Find the derivative of the function $f(x) = \frac{3x^2 + 2}{4x - 2}$

10. Find the second derivative of $y = x^2 e^x$

11. State the conditions for convexity of a function. Give an example

12. Write a short note on curve sketching.

13. How can we obtain total revenue function from the demand function.

14. State the mathematical relationship between elasticity of demand, AR and MR

(6 × 2 = 12 Marks)

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

15. Given $f(x) = \frac{x^2 - 9}{x^2 - 5x + 6}$ .Is $f(x)$ continuous at x=3?why?

16. Differentiate
    a) $y = (x^4 + x^3)(x^2 + x)$
    b) $y = x\log x$

17. Test whether the following function is increasing, decreasing or stationary state at x=1 and 4 if $y = 7x^3 - 10x^2 - 10x + 5$

18. Find the relative extreme value of the function $f(x) = 3x^3 - 36x^2 + 135x - 50$

(3×5=15 Marks)

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

19. Briefly explain the mathematical and economic applications of differentiation .Give Examples.

20. Given the following total revenue and total cost functions of a firm .Find the profit maximizing level of output and the maximum profit if the revenue function $TR = 4350Q - 13Q^2$ and cost function $TC = Q^3 - 5.5Q^2 + 150Q + 675$

(1×10=10 Marks)