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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
 Fourth Semester BA Economics Degree Examination, March 2017
 ECO4B06 – Computer Application for Economic Analysis
 (2015 Admission onwards)

Max. Time: 3 hours

Max. Marks: 80

Part A.**Objective type questions Answer all questions**

1. _____ helps to preview the slides in thumbnail form?

a) Status Bar	b) Scroll Bar
c) Slide sorter view	d) Title Bar
2. Which among the following represents a union type cell reference?

a) (A10:A20)	b) (B10:B20)
c) (A10, A20)	d) 10A
3. Which among following is not a malware?

a) Firewall	b) Adware
c) Spyware	d) Scareware
4. _____ helps to show the trend in a variable?

a) Line Graph	b) Pie Chart
c) Scatter Plot	d) Bar Chart
5. The Conditional sum wizard is an add-in function in

a) PowerPoint	b) Excel
c) Word	d) Access
6. The short cut for select all

a) Ctrl+S	b) Ctrl+L
c) Ctrl+A	d) Ctrl+B
7. Which of the following is not related with mail merge?

a) Foot Note	b) Greeting line
a) Main Document	b) Data Source
8. _____ consists of various groups under each tab

a) Button	b) Title bar
c) Ribbon	d) Status bar
9. Which of the following is not the example of business to consumer (B to C) e-commerce?

a) Amazone.com	b) e-bay.com
c) dell.com	d) lastminute.com
10. URI Stands for _____

a) Uniform Resource Indicator	b) Uniform Resource Identifier
c) Uniform Resource Indication	d) Uniform Resource Integration
11. Touch Screen is

a) Input device	b) Output device
c) Primary storage device	d) Secondary storage device
12. Which among the following agency conducts survey for poverty estimation in India.

a) IIPS	b) CSO
c) NSSO	d) ICSR

(12 x ½ = 6 Marks)

Part B

Very Short Answer Type Questions. Answer any 10 questions.

13. What you mean ribbon in MS Word?
14. Define malware.
15. What is main frame computer?
16. Explain how to insert a table in word.
17. Distinguish between webpage and website.
18. Define formula syntax.
19. Distinguish between Linear and Nonlinear trend line.
20. Briefly highlight the benefits of E-commerce?
21. Define world wide web?
22. Point out some uses of PowerPoint.
23. How data filtering option in excel is useful?
24. What is meant by a theme in PowerPoint Presentation?

(10 x 2 = 20 Marks)

Part B

Very Short Answer Type Questions. Answer any 6 questions.

25. Explain the steps to estimate regression equation using Data Analysis Toolpak.
26. What are the different types of softwares? Explain.
27. Explain the steps to add transition effect and animation to PowerPoint Presentation?
28. What you mean by function library in excel? List out 6 statistical functions and their uses?
29. Define Internet? Explain the uses of internet for the students of economics?
30. Explain 5 options to manipulate first document in word.
31. What is meant by memory? Distinguish between primary memory and secondary storage.
32. Explain meaning and main participants of electronic payment system.

(6 x 5 = 30 Marks)

Part C

Short ESSAY Type Questions. Answer any 2 questions.

33. Discuss the meaning and scope of E-commerce? Also explain major challenges of E-Commerce.
34. What you mean by word processor ? Explain main features of word processor ?
35. Explain how excel can be used for various statistical and economic analysis ?
36. What you mean by operating system? Explain the functions of operating system ?

(2 x 12 = 24 Marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
 Fourth Semester BA Economics Degree Examination, March 2017
 ECO4C04 – Mathematical Tools for Economics 4
 (2015 Admission onwards)

Max. Time: 1.30 hours

Max. Marks: 40

PART A**Answer all questions****A-Multiple Choice Questions**

1. Evaluate $\int_1^3 (X^2 + 3X + 2) dx$
 - a. $\frac{97}{3}$
 - b. $\frac{75}{3}$
 - c. $\frac{25}{3}$
 - d. None of these
 2. If $PQ = 200$ elasticity of demand is
 - a. 1
 - b. -1
 - c. 0
 - d. 2
 3. A function is $Y = f(x)$, is said to be convex, if its second order derivative is
 - a. positive
 - b. negative
 - c. zero
 - d. none of these
 4. Which of the following is the indefinite integral of $X^{1/2}$
 - a. $\frac{1}{2} X^4 + c$
 - b. $\frac{3}{2} X^{3/2} + c$
 - c. $\frac{1}{3} X^{3/2} + c$
 - d. $\frac{1}{3} X^3 + c$
 5. Income elasticity of the function, $Q = P_1^\alpha P_2^\beta M^\gamma$ is
 - a. α
 - b. β
 - c. γ
 - d. None of these
 6. Cross elasticity of complimentary goods must be
 - a. positive
 - b. negative
 - c. zero
 - d. none of these
- (6 × ½ = 3 Marks)**

Part B (Very Short Answer Type Questions)**Answer any 6 questions**

7. Distinguish between implicit and explicit function
8. Explain the relationship between returns to scale and degree of homogeneity.
9. Find the second order cross partial derivative of the function $Z = X^8 + Y^8$
10. Find $\frac{dy}{dx}$, if $F(x, y) = x^2 + 2xy^2 + 9y^4 = 0$
11. Differentiate $Y = 5(2x + 10)^2$
12. Distinguish between integration by parts and integration by substitution
13. Find $\frac{dy}{dx}$ of $Y = \frac{x+2}{x^2-64}$
14. State the conditions of maxima and minima of functions with one independent variable

(6 × 2 = 12 Marks)

Part C (Short Essay)

Answer any three questions

15. For the Cobb- Douglas production function, $Q = AL^\alpha K^\beta$, prove that both MP_L and MP_K are downward sloping.
16. Find the total differential of a) $Z = 2x_1 + 6x_1x_2 + x_2^2$
b) $Z = (5x_1^2 + 7x_2)(2x_1 - 4x_2^2)$
17. Distinguish between consumer's surplus and producer's surplus with the help of Integration
18. Demand function of two related commodities are $Q_1 = 400 - 3p_1 - 2p_2$ and $Q_2 = 600 - 2p_1 - 5p_2$. Find own price and cross price elasticity of demand. Also prove that the commodities are complimentary goods.

(3 × 5 = 15 Marks)

Part D (Essay Questions)

Answer any one of the following questions

19. Briefly discuss the role of Differential and Integral calculus in Economics.
20. A firm has the following production and cost function, $Q = K^{1/2} L^{1/2}$

$TC = 100 = 2K + 5L$, Find the maximising output and critical values for K and L

(1 × 10 = 10 Marks)

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fourth Semester BA Economics Degree Examination, March 2017
ECO4B05 – Quantitative methods for Economic Analysis – II
(2015 Admission onwards)

Max. Time: 3 hours

Max. Marks: 80

Section-A

[Answer all Questions. Each question carries 1 marks]

1. $\lim_{x \rightarrow 2} \frac{x^2 - 4}{x - 2}$ is
(a) 0 (b) ∞ (c) 4 (d) 8
2. Laspeyer's index number possess
(a) Downward bias (b) No bias (c) upward bias (d) None of the above
3. The component of time series attached to long-term variations is termed as
(a) Cyclic variation (b) secular trend (c) irregular variation (d) all the above
4. If $P(A) = 0.40$, $P(B) = 0.30$, $P(A \cup B) = 0.6$ then $P(A \cap B)$ is
(a) 0.2 (b) 0.1 (c) 0.3 (d) None of the above
5. Moving average method of fitting trend in a time series data removes the effect of
(a) Long-term movements (b) short-term movements (c) cyclic variation (d) none of these
6. Which of the following is regarded as a good index number of population growth
(a) GRR (b) NRR (c) TFR (d) CBR
7. The derivative of $\log x$ with respect to x is
(a) $\frac{1}{x}$ (b) $\frac{-1}{x^2}$ (c) $\frac{1}{x}$ (d) x
8. Crude birth rate mainly depends on
(a) Male population (b) Number of children (c) Female population (d) None of these

Fill in the blanks

9. If A and B are two mutually exclusive events then $P(A \cap B) = \text{-----}$
10. In tossing a die, the probability of getting an odd number is-----
11. For the cost function $c(x) = 1 + 5x + 3x^2$, the marginal cost of production 10 unit is-----
12. A function $f(x)$ is maximum when-----

(12 x ½ =6 Marks)

Section-B

[Answer any 10 Questions. Each question carries 2 marks]

13. When a function is said to be discontinuous?
14. Define elasticity
15. Find $\lim_{x \rightarrow 1} \frac{4x^4 + 3x^3 - 1}{x^2 + 7}$
16. Define sex ratio
17. Define general fertility rate
18. What is price relatives
19. Define random experiment
20. State addition theorem
21. Distinguish between mutually exclusive and mutually exhaustive events
22. What is the principle of least squares
23. Define marginal function
24. What is meant by time series analysis

(10 x 2 = 20Marks)

Section-C

[Answer any six Questions. Each question carries 5 marks]

25. Briefly explain the different components of time series
26. Determine the maxima and minima values (if any) of $f(x) = x^3 - 6x^2 + 9x - 5$
27. Define conditional probability. If $P(A) = 1/3$, $P(B) = 3/4$, $P(A \cup B) = 11/12$. Find $P(A/B)$
28. Briefly explain Bayes theorem
29. The cost function for the production of x units of an items is given by $10 - 4x^2 + 3x^3$.
Find (i) average cost (ii) marginal cost
30. What are index numbers. How do you construct consumer price index number
31. Differentiate the following function
(a) $y = x^2(1 + x^3)$ (b) $y = \frac{(5x - 2)^2}{x - 3}$
32. Two unbiased dice are thrown. Find the probability of getting the sum of two numbers is 8.

(6 x 5=30Marks)

Section-D

[Answer any two Questions. Each question carries 12 marks]

33. Construct Fisher's ideal index number for the following data and show how it satisfy time reversal test

Commodities	2002		2003	
	Quantity	Price	Quantity	Price
A	20	12	30	14
B	13	14	15	20
C	12	10	20	15
D	8	6	10	4
E	5	8	5	6

34. What do you understand by the term vital statistics? Explain its various uses
35. (a) Explain the following
(i) Independent events
(ii) Multiplication theorem
36. A bag contains 7 white and 9 black balls. Three balls are drawn at random. Find the probability that balls drawn are (i) 1 white and 2 black (ii) 2 white and 1 black
37. (i) What do you mean by left hand continuous and right hand continuous
(ii) Show that $f(x) = x^2 + 4x - 2$ is continuous for $x = 1$.

(2 x 12 = 24 marks)