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2B4A22500 (Pages : 2)

Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fourth Semester BA Degree Examination, April 2022

BEC4B06 – Macro Economics – II

(2019 Admission onwards)

Time: 2 ½ hours Max. Marks: 80

Section A

Short Answer Questions. Maximum marks in this section is 25.
Students can attempt all questions. Each question carries a maximum of 2 marks.

1. Distinguish real and nominal interest rates.
2. What is Hyper Inflation?
3. What you mean by *Paradox of Thrift*.
4. Discuss any three types of unemployment.
5. Write a brief note on Great Depression.
6. State any three types of business cycle.
7. Why LM curve slopes upward?
8. Briefly describe Okun's Law.
9. What is Stagflation?
10. WPI and CPI
11. Cost-Push Inflation
12. Write a note on Sacrifice ratio.
13. Government Purchase Multiplier.
14. State the factors that shifts IS curve.
15. State the factors affecting MEC

Section B

Short Essay/Paragraph Questions. Maximum marks in this section is35.
Students can attempt all questions. Each question carries a maximum of 5 marks

16. What are the factors causes shift in IS curve?
17. Explain the Keynesian theory of Effective Demand.
18. Discuss various methods used to measure inflation.

19. What is deflationary gap? How it is used to explain the process of inflation?

20. Critically examine the Keynesian Investment function.

21. Discuss the effects of inflation and Sacrifice ratio.

22. Briefly discuss the effects of recent pandemic Covid-19 on employment prospects of India.

23. Critically examine the accelerator theory of Investment.

Section: C
Long Essay Questions. Answer any two questions.
Each question carries a maximum of 10marks.

24. What is unemployment? List out various types and measures to reduce unemployment.

25. What is inflation? What are its classifications? Discuss Inflationary gap model by Keynes.

26. What is Trade Cycle? Critically examine the Schumpeter's theory of Trade Cycle.

27. Provide an account of Global Recession of 2008 and its impact of global economy.

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fourth Semester BA Degree Examination, April 2022

BEC4B05 – Quantitative Methods for Economic Analysis – II

(2019 Admission onwards)

Time: 2 ½ hours

Max. Marks: 80

SECTION-A

Each question carries 2 Marks.
Maximum Marks that can be scored in this section is 25.

1. Define sample space with an example
2. Explain any four useful functions in Excel.
3. Define Fisher's index number.
4. Define Factor reversal test.
5. What is the benefit of using formula in Excel sheet
6. If the mean and variance of a binomial distribution are 5 and 3 respectively. Find the probability of getting exactly three successes
7. How to calculate the sum of the values in a column in Excel
8. Define secular trend.
9. What is weighted index number?
10. For two events X and Y $P(X)=1/2$, $P(Y)=1/4$, $P(X\cap Y)=1/4$. Find $P(Y/X)$
11. Discuss a time series and write its importance.
12. Give two instances where binomial distribution can be applied
13. What is price relatives?
14. State addition theorem of probability.
15. Define random experiment

SECTION-B

Each question carries 5 Marks.
Maximum Marks that can be scored in this section is 35.

16. Briefly explain the different components of time series
17. Compute the trend values by finding four yearly moving averages for the following time series data

Year	1990	1991	1992	1993	1994	1995	1996	1997
Value	280	290	305	360	390	410	420	425

18. For two events A and B, $P(A) = 0.5$, $P(B) = p$, $P(A \cup B) = 0.7$. Find p if A and B are independent.

19. A random variable X follows a Poisson distribution with mean 2. Calculate the probability that

(a) $X = 0$ (b) $X = 1$ (c) $X \geq 2$

20. What do you mean by Toolpack. How to execute Toolpack in Excel

21. Write the syntax to find the probability for a binomial random variable to take the value x out of n trial with probability of success p.

22. Write down the properties of Normal distribution.

23. If A and B are mutually exclusive events and if $P(A) = 0.5$, $P(B) = 0.3$. Find

(i) $P(A \cup B)$ (ii) $P(A/B)$ (iii) $P(A^c \cap B^c)$

SECTION-C

(Answer *any two* Questions and each carries 10 marks)

24. (a) Explain the following

(i) Equally likely events

(ii) Independent events

(iii)Mutually exclusive events.

(b) A bag contains 7 white and 9 black balls. Three balls are drawn at random. Find the probability that balls drawn are

(i) one white and two black (ii) two white and one black.

25. Calculate Laspeyer's, Paasche's and Fisher's index number for the following data

Items	2015		2018	
	Price	Quantity	Price	Quantity
A	15	30	22	35
B	20	40	25	42
C	28	50	38	50
D	12	20	15	25
E	25	15	30	28

26. Fit a binomial distribution to the following data

X	0	1	2	3	4	5	6	7
f	0	4	13	28	42	20	6	2

27. Find Σx, Σx^2, Σxy, Σy, Σy^2 and correlation coefficient using Excel functions.

X	43	21	25	42	57	59
Y	99	65	79	75	87	81

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fourth Semester BA Degree Examination, April 2022

BEC4C04 – Mathematical Methods for Economics IV

(2019 Admission onwards)

Time: 1.5 hours Max. Marks: 40

Section A

Short Answer Questions. Maximum marks in this section is 10.
Students can attempt all questions.
Each question carries a maximum of 2 marks.

1. What is meant by feasible solutions in Linear Programming Problem?
2. What are the limitations of graphical method of LPP?
3. Find the marginal product of capital (MP_K) and the marginal product of labour (MP_L) given the production function $Q = 3KL + 6K^2 + 2L^2$.
4. Find the marginal cost function given the average cost function $AC = \frac{50}{Q} + 5 + 7Q + 6Q^2$.
5. Given the production function $Q = x^2 + 5xy + 4y^2$, find the marginal productivity of the inputs x and y.
6. Find the integral for $y = \int(3x^2 + 4x^3)dx$, given the initial condition y = 0 when x = 0.
7. Marginal revenue is given by $MR = 100 + 2Q + 3Q^2$. Find the total revenue function given that TR = 0 when Q = 0.

Section B

Short Essay/Paragraph Questions. Maximum marks in this section is 20.
Students can attempt all questions.
Each question carries a maximum of 5 marks.

8. Given the total cost function $TC = Q^3 - 5Q^2 + 60Q$, find the quantity (Q) at which average cost (AC) is minimized.
9. Using substitution method, find the integral for $\int(x-9)^{7/4}$.
10. Given the demand function $P = 45 - 0.5Q$, find the consumer's surplus when equilibrium price = 32.5 and equilibrium quantity = 25.

11. Explain the advantages and disadvantages of linear programming.
12. Distinguish between cross elasticity of demand and income elasticity of demand. Given the demand for coffee $Q_C = 4850 - 5P_C + 1.5P_T + 0.1Y$, with income Y = 10000, price of coffee P_C = 200 and price of tea P_T = 100, find the cross elasticity of demand and income elasticity of demand.

Section C

Long Essay Questions. Answer any one questions.
The question carries a maximum of 10 marks.

13. The cost function for a discriminating monopolist is given by $C = 2Q^2 - 5Q + 3$, where Q is the total output (that is, $Q = Q_1 + Q_2$). The total revenue in the first market is $TR_1 = 8Q_1 - 5Q_1^2$ and total revenue in the second market is $TR_2 = 7Q_2 - 2Q_2^2$. Find the firm's profit maximizing output in each market.
14. Solve the following LPP graphically

$$Minimize\ Z = 20x_1 + 40x_2$$

subject to the constraints

$$36x_1 + 6x_2 \geq 108$$
$$3x_1 + 12x_2 \geq 36$$
$$20x_1 + 10x_2 \geq 100$$

and non-negativity restrictions

$$x_1 \geq 0, \quad x_2 \geq 0$$