

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fourth Semester BA Degree Examination, March/April 2020
BECO4B06 – Macro Economics II
(2018 Admission onwards)

Time: 3 hours

Max. Marks: 80

SECTION A

Answer all questions. Each question carries ½ marks

The concept of Inflationary Gap was originated by -----

- a)Irving Fisher b)J.M Keynes c)Marshall d)Irving Fisher.

Whose name is associated with Vertical Phillips Curve?

- a)Phillips b)Keynes c)Edmund S. Phelps d)Marshall

Money whose face value is equal to its intrinsic value is called-----

- a)Metallic money b)Standard money c)Paper money d)Token money

Paper money which circulates on the authority of the government is -----

- a)Fiat money b)Paper money c)Metallic money d)Subsidiary money

Inflation deliberately undertaken to relieve depression is -----

- a)Deflation b)Disinflation c)Stagflation d)Reflation

Fiscal policy is a policy of the -----

- a)Central bank b)Government c) Commercial bank d)None of the above

The equilibrium in the goods market is shown by -----

- a)IS-Curve b)LM-Curve c)BP-Curve d)ISLM-Curve

Pure Monetary Theory of Trade Cycle is put forward by -----

- a)Habreler b)Hawtrey c)Hayek d)Pigou

Speculative demand is ----- related to the interest rate

- a)Inversely b)Directly c)Linearly d)None of the above

At the classical range the speculative demand for money is perfectly -----

- a)Inelastic b)Elastic c)Infinity d)Unitary elastic

Fishers equation of exchange is expresses as -----

- a)MV=PT b) MP=PT c)MD=VT d)MP=MT

High powered money is defined as -----

- a)H=C+R b)H=P+M c)H=D+S d)H=V+T

(12 x ½ = 6 Marks)

SECTION B

Answer any ten questions. Each question carries 2 marks

- 13 Describe MEC.
- 14 What is LM-Curve?
- 15 What is meant by open market operations?
- 16 Define Sacrifice Ratio.
- 17 What is Frictional unemployment?
- 18 Explain moral suasion
- 19 What are the inconveniences of Barter?
- 20 What do you mean by liquidity trap?
- 21 What are the causes of inflation?
- 22 What is Credit rationing?
- 23 Define foreign trade multiplier
- 24 What is near money?

(10 x 2 = 20 Mar

SECTION C

Answer any six questions. Each question carries 5 marks

- 25 Explain the major tools or instruments of fiscal policy
- 26 How do you derive the LM-Curve?
- 27 Explain the different phases of a business cycle
- 28 Distinguish between inside and outside money
- 29 Explain graphically the concept of inflationary gap
- 30 Briefly state the restatement of the Quantity theory by Friedman
- 31 Briefly describe the trade-off between inflation and unemployment
- 32 What do you mean by a surplus or deficit in the balance of payments?

(6 x 5 = 30 Mar

SECTION D

Answer any two questions. Each question carries 12 marks

- 33 Explain the general equilibrium in the economy using IS-LM and BP curves
- 34 Explain how income policy can be acted as a counter cyclical measure
- 35 Explain different methods for controlling inflation
- 36 What do you mean by money and what are the main functions of money?

(2 x 12 = 24 Mar

22

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fourth Semester BA Degree Examination, March/April 2020
BECO4B05 – Quantitative Methods for Economic Analysis- II
(2018 Admission onwards)

Time: 3 hours

Max. Marks: 80

Section A

(Answer all questions, each question carries ½ mark)

1. The classical probability is based on which of the following assumption
 - a) Outcomes are unpredictable
 - b) Outcomes are equally likely
 - c) Probabilities are the functions of outcomes
 - d) Experiment is random
2. If $A \cap B = \phi$, i.e., A and B are disjoint sets, then the event A and B are
 - a) Mutually exclusive
 - b) Mutually non exclusive
 - c) Exhaustive
 - d) Mutually exclusive and collectively exhaustive
3. Three unbiased coins are flipped and the probability of obtaining two head and one tail is
 - a) 1/8
 - b) 3/8
 - c) 4/8
 - d) 7/8
4. A discrete random variable take
 - a) Infinite and specific set of countable values.
 - b) Finite and specific set of countable values.
 - c) values over an interval
 - d) None of the above
5. Standard deviation of a binomial distribution is
 - a) n
 - b) np
 - c) npq
 - d) \sqrt{npq}
6. Which of the following is/are the reason for a bell shaped normal curve
 - a) The total area under the curve is 1
 - b) The curve is symmetric
 - c) The two tails of the curve extend indefinitely
 - d) All the above
7. Who among the following scholar is responsible for the development of the subject econometrics?
 - a) Ranger Frisch
 - b) Trygve Haavelmo
 - c) Jan Tinbergen
 - d) Lawrence Klien
8. Under the method of least squares, the principle is to
 - a) Minimize the error term
 - b) Minimize the variance
 - c) Minimize the squared error term
 - d) Maximize the R^2

9. The term 'best' in the best linear unbiased estimators (BLUE) implies :
- a) Maximum variance of the estimators
 - b) Minimum variance of the estimators
 - c) Average variance of the estimators
 - d) Unbiased variance of the estimators
10. R^2 means
- a) The ratio of explained variations to total variations
 - b) The ratio of residual variations to total variations
 - c) The ratio of total variations to residual variations
 - d) The ratio of residual variations to explained variations
11. MS Excel is a
- a) Word processing Program
 - b) Spreadsheet Program
 - c) Presentation Program
 - d) Editing Program
12. Formulas in Excel start with
- a) #
 - b) %
 - c) =
 - d) +

(12 x $\frac{1}{2}$ = 6 Marks)

Section B

(Answer any 10 questions, each question carries 2 marks)

13. Distinguish between Independent and Dependent Events.
14. In tossing a coin thrice, let event, A = exactly one tail and B = at least two heads occurred. Find out $P(A \cup B)$
15. What is the probability of drawing two Clubs from a well shuffled pack of 52 cards?
16. What is a random variable?
17. Find out the expected value of the number obtained on a single throw of a dice
18. If $n=12$, probability of success is 0.56 and what is mean and standard deviation of binomial distribution?
19. Define Econometrics.
20. What is stochastic error term?
21. Distinguish between Population regression and sample regression function.
22. How can you add cells, rows or columns in Excel?
23. What is Formula syntax?
24. What are the different types of functions in Excel?

(10 x 2 = 20 Marks)

Section C

(Answer any 6 questions, each question carries 5 marks)

25. What are the various approaches to probability?
26. A committee of 5 students to be formed out of a group consists of 4 girls and 4 Boys. Find the probability that the committee will consist of at least 2 boys?
27. Explain binomial distribution, conditions of a binomial experiment and what are its parameters and characteristics?
28. In a town 10 accidents took place in a span of 50 days. Assuming that the number of accidents per day follows a Poisson distribution, find the probability that there will be three or more accidents in a day.
29. Explain normal distribution, its importance, parameters and characteristics?
30. Discuss the major assumption of Ordinary Least Square Method?
31. Discuss the methodology of Econometrics?
32. How to run Regression in Excel using Data Analysis Tool Pack?

(5 x 6=30 Marks)

Section D

(Answer any 2 questions, each question carries 12 marks)

33. Discuss Bayes Theorem and its uses. Suppose, in a bolt factory, Machine A and B manufacture 60% and 40% of total output respectively. Of the total output, 5% and 4% of Machine A and Machine B are defective bolts. A bolt is drawn at random and found to be defective. What is the probability that it was manufactured by machine B?
34. A random variable X is defined to be the difference between the higher value and the lower value when two dice are thrown. If they have the same value, X is defined to be 0. Find the probability distribution for X and its mean and Standard deviation.

35. The following table gives the data on income and consumption expenditure of households. Construct a theoretically valid econometric model, estimate the relationship and interpret the results.

Household	Income	Consumption expenditure
1	80	55
2	100	88
3	120	90
4	140	80
5	160	118
6	180	120
7	200	144
8	220	135
9	240	145
10	260	175

36. Explain the uses of MS Excel in learning economics and statistics?

(2 x 12=24 Mar

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
 Fourth Semester BA Degree Examination, March/April 2020
 BECO4C04 – Mathematical Methods for Economics IV
 (2018 Admission onwards)

Time: 1 ½ hours

Max. Marks: 40

PART A**Multiple Choice Questions****Answer all questions, Each question carries 3 marks**

1. A firm with total costs $TC = 50 + 3Q$ for Q units of output, which sells its output at price $P = 5$, breaks even at the output level:
 a) $Q = 50/3$ b) $Q = 50/8$ c) $Q = 50/2$ d) $Q = 45/3$
2. For a firm whose total cost and total revenue functions are given by:
 $TC = mQ + c$, $TR = P \cdot Q$ which of the following statements is true?
 a) If variable costs per unit (m) increase, the break even point (Q) will fall
 b) If price (P) falls, the break even point will rise
 c) If fixed costs (c) fall, the break even point will fall
 d) If fixed costs (c) rise, the break even point will be unchanged
3. For the demand and supply functions, $Q_d = 10 - P$, $Q_s = 3P - 2$, the equilibrium (P_e, Q_e) is :
 a) (6,4) b) (5,5) c) (7,3) d) (3,7)
4. For the function $Q = AK^a L^b$ which of the following statements are true?
 a) $dQ/dL = AbK^a L^{b-1}$
 b) Marginal Product of Labour (MPL) = $AaK^a L^b$
 c) Marginal Product of Capital (MPK) = aQ / K
 d) Marginal rate of substitution of capital for labour (MRS) = $|dK / dL|$
5. Which of the following is a property of all linear programming problems?
 a) Alternate courses of action to choose from
 b) Minimization of some objective
 c) A computer program
 d) Usage of graphs in the solution
6. Unboundedness is usually a sign that the LP problem
 a) Has finite multiple solutions.
 b) is degenerate.
 c) Contains too many redundant constraints.
 d) Has been formulated improperly.

(6x=3 marks)

Part B (Short Answer Type Questions)

Answer *any six* questions

(Provide mathematical implications to following concepts)

7. Consumers equilibrium
8. Consumers surplus
9. Income elasticity of demand
10. Essential characteristics of Linear programming Models
11. Cobb Douglas Production function
12. Two rules of integration
13. Essential Requirements to Formulate LPP.
14. Maxima and minima applications in economics

(6 x 2 = 12 marks)

Part C

(Short Essay Questions)

Answer any Three questions. Each question carries 5marks

15. A monopolist faces the following demand curve: $Q = 144/P^2$ where Q is the quantity demanded and P is price. Its *average variable cost* is $AVC = Q/2$ and its *fixed cost* is 5.
 - a) What are its profit-maximizing price and quantity? What is the resulting profit?
 - b) Suppose the government regulates the price to be no greater than \$4 per unit. How much will the monopolist produce? What will its profit be?
 - c) Suppose the government wants to set a ceiling price that induces the monopolist to produce the largest possible output. What price will accomplish this goal?
16. Which of the following utility functions are consistent with convex indifference curves and which are not?
 - a) $U(X, Y) = 2X + 5Y$
 - b) $U(X, Y) = (XY)^{.5}$
 - c) $U(X, Y) = \text{Min}(X, Y)$, where Min is the minimum of the two values of X and Y .
17. Assume free market and that the goods are sold at market equilibrium. Find the consumer surplus, producer surplus, and total social gain. Supply Price(q) = $50 + q/2$ and Demand Price(q) = $150 - q/5$.
18. A company makes two products (X and Y) using two machines (A and B). Each unit of X that is produced requires 50 minutes processing time on machine A and 30 minutes processing time on machine B . Each unit of Y that is produced requires 24 minutes processing time on machine A and 33 minutes processing time on machine B . At the start of the current week there are 30 units of X and 90 units of Y in stock. Available processing time on machine A is forecast to be 40 hours and on machine B is forecast to

be 35 hours. The demand for X in the current week is forecast to be 75 units and for Y is forecast to be 95 units. Company policy is to maximise the combined sum of the units of X and the units of Y in stock at the end of the week.

- a) Formulate the problem of deciding how much of each product to make in the current week as a linear program.
- b) Solve this linear program graphically.

(3×5=15 Marks)

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

19. A monopolist is deciding how to allocate output between two geographically separated markets (East Coast and Midwest). Demand and marginal revenue for the two markets are

$$P_1 = 15 - Q_1$$

$$P_2 = 25 - 2Q_2$$

$$MR_1 = 15 - 2Q_1$$

$$MR_2 = 25 - 4Q_2$$

The monopolist's total cost is $C = 5 + 3(Q_1 + Q_2)$. What are price, output, profits, marginal revenues, and deadweight loss (i) if the monopolist can price discriminate? (ii) if the law prohibits charging different prices in the two regions?

20. Assume Supply Price(q) = $10 + q^2$ and Demand Price(q) = $210 - q^2$.

- a) Find the consumer surplus, producer surplus, and total social gain at market equilibrium.
- b) Draw consumers and producers surplus
- c) If the producers can form a cartel and restrict the available quantity to 5, selling at the demand price for 5 (for a price of 185), what are the consumer surplus, producer surplus, and total social gain?
- d) Find the price where a producer cartel will maximize the producer surplus. Find the producer surplus at that price.

(1×10=10 Marks)