

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
 First Semester MA Economics Degree Examination, November 2019
 MEC1C04— Quantitative Methods for Economic analysis – I
 (2019 Admission onwards)

Time: 3 hours

Max. Weightage : 30

Part A : Objective Type Questions

Answer *all* questions.Each question carries $\frac{1}{5}$ weightage

I. Multiple choice:

1. If in an LPP the constraints are of \geq type, then the constraints in the dual problem will be of
 a) \geq type b) \leq type c) = type d) depends on the objective function
2. Vogel's approximation method is used for solving
 a) transpotation problem b) assignment problem
 c) all types of LPP d) dynamic programming problem
3. $\int_a^b f(x)dx$ can be interpreted geometrically as the area enclosed by the curve $y = f(x)$, the ordinates at $x = a$, $x = b$ and
 a) x -axis b) tangent to the curve
 c) y -axis d) None of these
4. If p denotes the probability of an event A , then
 a) $0 \leq p \leq 1$ b) $-1 \leq p \leq 1$ c) $-\infty \leq p \leq \infty$ d) $p \geq 1$
5. $\frac{d}{dx} \left(\frac{x^2}{2} \right)$ is
 a) x b) $2x$ c) $-2x$ d) $-x$
6. If A and B are two independent events, then $P(A|B)$ is
 a) $P(B)$ b) $P(A)$ c) $P(A \cap B)$ d) $P(A \cup B)$
7. If $F(x)$ represents the distribution function of a random variable, then $F(-\infty)$ is
 a) 1 b) 0 c) $-\infty$ d) None of these

II. Fill in the Blanks:

8. If the derivative of a function at a point is zero, then the slope of the function at that point is _____
9. $\int 1 dx =$ _____
10. If A and B are two independent events, then $P(A \cap B) =$ _____
11. The curve $y = x^2$ attains its minimum at _____

III. State True or False:

12. If a function attains maximum at a point then the first order derivative of the function at that point is less than zero.
13. If $P(A) = 1$ for an event A , then A is called an impossible event.
14. When two coins are tossed simultaneously, probability of getting two heads is $\frac{1}{4}$.
15. $\frac{d}{dx} \log x = \frac{1}{\log x}$.

(15 x $\frac{1}{5}$ = 3 weightage)

Part B : Short Answer Questions

Answer *any* 5 questions.

Each question carries 1 weightage

16. Write down the dual of the LPP

Maximize : $z = x_1 - x_2 + 3x_3$

Subject to :

$x_1 + x_2 + x_3 \leq 10$

$2x_1 - x_3 \leq 2$

$2x_1 - 2x_2 - 3x_3 \leq 6$

$x_1, x_2, x_3 \geq 0.$

17. What is meant by an assignment problem?
18. Explain integration by parts.
19. What are the conditions in differential calculus for attaining maximum value of a function?

20. Explain probability distribution of a discrete random variable?
21. State addition and multiplication rules of probability. What is meant by the independence of the events A and B ?
22. Define distribution function of a random variable? What are its properties?
23. Let A and B be two events such that $P(A) = 0.5$ and $P(A \cup B) = 0.8$. Find $P(B)$ if
- A and B are mutually exclusive.
 - A and B are independent.

(5 x 1 = 5 weightage)

Part C : Short Essay Questions

Answer *any* 7 questions.

Each question carries 2 weightage

24. Solve graphically

$$\text{Maximize : } z = 180x_1 + 150x_2$$

Subject to :

$$4x_1 + 2x_2 \leq 40$$

$$x_1 + 3x_2 \leq 15$$

$$x_1, x_2 \geq 0.$$

25. Solve the following transportation problem.

	D_1	D_2	D_3	D_4	
O_1	14	25	45	5	6
O_2	65	25	35	55	8
O_3	35	3	65	15	16
	4	7	6	13	

26. Integrate $y = x^2 \log x$.
27. Determine the maximum value of $4x^3 + 9x^2 - 29x + 20$.
28. Evaluate $\int_0^{\infty} e^{-3x} dx$.
29. A problem in statistics is given to students A, B, C, D and E, whose chances of solving it are $\frac{1}{3}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{6}$ respectively. What is the probability that the problem get solved?

30. The probability that a contractor will get a plumbing contract is $\frac{2}{3}$ and the probability that he will not get an electrical contract is $\frac{5}{9}$. If the probability of getting at least one contract is $\frac{4}{5}$, what is the probability that he will get both the contracts?
31. Distinguish between row moments and central moments of a random variable.
32. Define mathematical expectation.
If it rains, a taxi driver earns Rs.500 per day. If it does not rain he loses Rs.100 a day. If the probability of rain is 0.4, what is his expected income on a day?
33. Discuss the constraint optimization methods.

(7 x 2 = 14 weightage)

Part D : Essay Questions

Answer *any 2* questions.

Each question carries 4 weightage

34. Solve using simplex method

$$\text{Maximize : } z = 45x_1 + 8x_2$$

Subject to :

$$5x_1 + 20x_2 \leq 400$$

$$10x_1 + 15x_2 \leq 450$$

$$x_1, x_2 \geq 0.$$

35. Discuss the applications of integral calculus in economics.
36. Discuss in detail the different definitions of probability.
37. State Bayes theorem.

Three machines A, B and C produces 60, 30 and 10 percent of the total production of a factory respectively. A produces 2% defective, B produces 3% defective and C produces 4% defective in their production. An item chosen randomly from the total production is found to be defective. What is the probability that it has come from machine A?

(2 x 4 = 8 weightage)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester MA Degree Examination, November 2019

MEC1C03– Indian Economy, Problems & Policies

(2019 Admission onwards)

Time: 3 hours

Max. Weightage : 30

Part A (Multiple Choice Questions)*Answer all questions**Each question carries 1/5 weightage*

1. Absolute poverty means:
 - (a) Poverty in terms of the basic minimum calorie requirements
 - (b) Poverty in terms of the prevailing price level
 - (c) Poverty in terms of the absolute number of people
 - (d) Poverty in terms of the absolute level of unemployment
2. Among the following who are eligible to benefit from the MGNREGA?
 - (a) Adult members of households of all backward communities
 - (b) Adult members of any household
 - (c) Adult members of BPL households
 - (d) Adult members of only the SC/ST households
3. India's rank according to HDI in 2018:
 - (a) 132
 - (b) 130
 - (c) 134
 - (d) 131
4. Open market operations in the context of Indian Economy refers to:
 - (a) Purchase and sale of government securities by the RBI
 - (b) Lending by commercial banks to industry and trade
 - (c) Borrowing by scheduled banks from the RBI
 - (d) None of these
5. Evergreen revolution indicates:
 - (a) Wheat revolution
 - (b) Organic farming
 - (c) Fish production
 - (d) Promotion of horticulture
6. As per Census 2011, Kerala holds the maximum sex ratio among states which stands at:
 - (a) 1046
 - (b) 1092
 - (c) 936
 - (d) 1084.

7. UNDP has recently introduced a new poverty index known as:
(a) Social Poverty Index b) Human Poverty Index
(c) Multi-dimensional Poverty Index d) Poverty Gap Index
8. India imports crude oil in largest volume from:
(a) UAE b) Iran c) Iraq d) Saudi Arabia
9. In Balance of Payments Accounting, gifts from foreigners are considered as:
(a) Capital receipts b) Unrequited receipts
(c) Services d) Goods
10. Indian agriculture found which type of Unemployment:
(a) Frictional b) Seasonal
(c) Disguised d) Involuntary
11. In India, present trend of rapid urbanisation is due to:
(a) Lack of employment opportunities in rural areas
(b) Changing consumption pattern and life styles
(c) Breakup of joint family system
(d) Abolition of Jamindari system
12. The AMRUT programme focuses on:
(a) Providing water supply and urban transport b) Providing nutritional support
(c) Providing electricity connection d) Providing free LPG connections
13. The process of selling government equities in Public Sector Enterprises is called:
(a) Investment b) Disinvestment
(c) Open market operations d) Foreign Direct Investment
14. This is referred to inflation in some commodities, deflation in others.
(a) Stagflation b) Inflationary gap
(c) Core inflation d) Skewflation
15. The Author of the book "Beyond the Invisible Hand".
(a) Adam Smith b) Jagdish Bhagwati
(c) Kaushik Basu d) Raghuram Rajan

(15 x 1/5 = 3 Weightage)

Part B (Short Answer Questions)

Answer any five questions

Each question carries a weight of 1.

16. Sustainable development
17. Inclusive growth
18. Second generation reforms
19. Human Poverty Index
20. Cropping pattern
21. Foreign investment inflows
22. Non-performing assets
23. Kerala model of development

(5 x 1 = 5 Weightage)

Part C (Short Essay Questions)

Answer any Seven questions.

Each question carries a weight of 2.

24. Briefly explain the different measures of Poverty.
25. Explain the main highlights of New Economic policy since 1991.
26. Write a short note on farmer's indebtedness and Suicides since liberalisation in India.
27. Describe the Sustainability of the service led growth in India.
28. What are the important steps taken by RBI to curb NPA?
29. Briefly elaborate the growth and composition of exports and imports.
30. Point out the reasons for fiscal crisis in Kerala.
31. Point out the important reasons for Industrial stagnation in Kerala.
32. Write a short note on democratic decentralisation in Kerala.
33. Briefly explain the impact of Gulf Migration on Kerala Economy.

(7 x 2 = 14 Weightage)

Part D (Essay Questions)

Answer any two questions

Each question carries a weight of 4

34. Critically examine the impact of Economic reforms on Indian Economy.
35. Describe recent monetary reforms in India and point out the challenges to monetary policies faced by Indian economy.
36. Trace out the position of Balance of Payments in India since 1991.
37. Critically examine the Kerala model of development and suggest the sustainability issues related to Kerala economy.

(2 x 4 = 8 Weightage)

SECTION- B
SHORT ANSWER TYPE

This section consists of eight questions having 1 weightage each. Answer any five questions

16. Externalities
17. CES production function
18. Economies of scope
19. Price leadership
20. Engineering cost
21. Non zero sum game
22. Uncertainty
23. Risk spreading

(Total Weightage 5)

SECTION-C
SHORT ESSAY QUESTIONS

This section consists of ten questions . Answer any seven. Each carries 2 weightage.

24. Distinguish between co-operative and non-co-operative game
25. What is Markowitz hypothesis
26. Discuss kinked demand curve approach of oligopoly .
27. Explain CES Production function
28. Briefly explain Limit Pricing
29. Explain Oliver Eaton Williamson's model of a firm
30. What is characteristic approach of Kelvin Lancaster
31. What is Bandwagon and Snob effect
32. Discuss state preference approach to choice and uncertainty
33. Briefly explain Limit pricing model of Sylos Labini and Modigliani

(Total Weightage 14)

SECTION-D
ESSAY QUESTIONS

This section consists of four questions . Answer any two. Each carries 4 weightage.

34. Analyse the role of stock adjustment principle as a development over conventional demand theory?
35. Critically examine Francois Cournot and Von Stackelberg's model of Oligopoly.
36. Evaluate in detail, the advantage of CES production function over Cobb Douglas production function.
37. Briefly explain game theory. Is Nash equilibrium in game theory efficient ?

(Total Weightage 8)

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
First Semester MA Economics Degree Examination, November 2019
MEC1C02 – Macro Economics : Theories and Policies - I
(2019 Admission onwards)

Time: 3 hours

Max. Weightage : 30

PART A

Objective Type Questions

Answer all the questions (Weightage for each Question 1/5. Total Weightage -3)

1. Investment multiplier is calculated by:
a) $1/MPC$ b) $1/MPS$ c) $1/1-MPS$ d) $1/1+MPC$
2. If consumption function is $C=100+.8Y$ and $I=50$, what is the equilibrium level of income?
a) 820 b) 750 c) 650 d) 700
3. In repressed inflation buyers are rationed in
a) Labour market only b) Goods market only
c) Both in goods and labour market d) None of the above
4. The steepness/flatness of the IS curve depends on:
a) Interest elasticity of investment b) Interest elasticity of demand for money
c) MPC d) None of the above
5. Keynesians believe:
a) Dichotomy between real and monetary sector of the economy
b) Supply creates its own demand
c) An expansionary fiscal policy leads to crowding out of private investment
d) All the above
6. Transitory income means
a) Unanticipated additions or subtractions in consumption
b) Unanticipated additions or subtractions in income
c) The amount which consumer unit could consume while maintaining its wealth intact
d) All the above
7. The persistence of an event into the future in the economy even after the factors that led to the event have been removed known as....
a) Hysteresis effect b) Disequilibrium models
c) Trade Cycle d) None of the above

8. Menu cost means
- Cost incurred to a firm in order to change their prices
 - Cost incurred to a firm not to change their prices
 - Difference between revenue and profit of a firm
 - None of the above
9. False trading refers to.....
- The trading of goods at equilibrium prices
 - The trading of goods at disequilibrium prices
 - Both a & b
 - None of the above
10. Super multiplier shows
- Effect of Investment on income only
 - Effect of Consumption on Investment only
 - Multiplier- accelerator interaction
 - None of the above
11. Technological shocks refer to:
- Sudden changes in economic activity
 - Sudden changes in technology that significantly affect the production function
 - It shows the effects of economic policy through econometric models
 - All the above
12. In Keynesian theory, aggregate supply schedule:
- Slopes upward to the right.
 - Vertical in shape.
 - Downward sloping
 - None of the above
13. Acceleration means the effect of:
- Investment on income
 - Consumption on Investment
 - Savings on income
 - Savings on investment
14. Which of the following is not an assumption of simple Keynesian model of income determination?
- Demand creates its own supply
 - The aggregate price level remains fixed
 - Excess production capacity in the economy
 - Supply creates its own demand
15. Making intelligent use of all available information by economic agents to form expectations about the future known as....
- Rational Expectation hypothesis
 - Efficiency models
 - NAIRU
 - Unitary decision hypothesis

PART B

Short Answer Questions

Answer any 5 (Weightage for each Question 1. Total Weightage -5)

16. Explain 'Crowding out effect'.
17. State Keynes 'Psychological law of consumption'.
18. Explain 'Fiscalism'.
19. Write a note on how investment decisions related to Tobin's q ?
20. What you mean by DSGE model?
21. Explain 'Keynes effect'
22. What is 'Effective demand'?
23. Explain the concept 'Liquidity Trap'.

PART C

Short Essay Questions

Answer any 7 (Weightage for each Question 2. Total Weightage -14)

24. Distinguish between Pigou effect and real balance effect.
25. How Permanent Income Hypothesis reconcile the short run variability and long run constancy of income and consumption ratio?
26. "The decision to supply of labour automatically become the decision to demand goods".
Comment in the context of Unitary Decision hypothesis.
27. Why Efficiency wage model argue for the payment of efficiency wage to labourers?
28. Do you agree that the present unemployment is strongly influenced by past unemployment and economies stuck in unemployment traps? Support your argument.
29. Explain Fisher's Inter-temporal Choice Model.
30. What is MEC? Examine its role in Keynesian Investment Theory?
31. Discuss Keynesian labour market and underemployment Equilibrium.
32. Briefly explain the dissimilarities of monetarist and Keynesians views.
33. Write a note on REBCT.

PART D

Essay Questions

Answer any 2 (Weightage for each Question 4. Total Weightage -8)

34. Discuss Keynes accelerator theory of Investment and explain the concept of super multiplier.
35. Summarize Hicks-Hansen IS-LM Model and evaluate its policy effectiveness in classical, intermediate and Keynesian ranges.
36. How New Keynesian macro economists explains the various reasons for wage-price rigidity?
37. Outline Clower and Leijonhufvud disequilibrium models.