AH ECO(03)

2018

(2nd Semester)

Time : 3 hours

Full Marks : 80

Answer from **both** the Sections as per direction

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(INTRODUCTORY MACROECONOMICS)

SECTION – A

1. Answer the following : 2×8

   (*a*) What is meant by 'stock' in macro-economics ?

   (*b*) What is macrostatic ?

   (*c*) What is 'Green Accounting' ?

(*d*) What is the problem of double counting in the measurement of national income ?

(*e*) Demand for money in the context of Cash Balance approach.

(*f*) What is Demand Pull inflation ?

(*g*) What is 'Stagflation' ?

(*h*) What is meant by the concept of multiplier ?

SECTION – B

Answer **all** questions : 16×4

2. (*a*) What do you mean by national income ? What are the difficulties while estimating national income ?

Or

(*b*) Write notes on :

(*i*) Circular flow of income (*Two* sector model)

(*ii*) Income method of measuring national income.

3. (*a*) Explain Fisher's equation of Quantity Theory of Money.

Or

(*b*) Keynesian theory of Money is a reformulation of Fisher's Quantity Theory of Money– Explain.

4. (*a*) Explain the concept of 'inflationary gap' ? How can it be controlled ?

Or

(*b*) Explain different measures to control inflation.

5. (*a*) Discuss the Keynesian theory of income and employment determination.

Or

(*b*) The Marginal Efficiency of Capital (MEC) and the rate of interest (*r*) together determine the level of investment– Explain.

AH ECO(04)

2018

(2nd Semester)

Time : 3 hours

Full Marks : 80

Answer from **both** the Sections as per direction

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(MATHEMATICAL METHODS FOR ECONOMICS-II)

SECTION – A

1. Answer of the following : 2×8

(*a*) Find the determinant $|A|$ of

$$A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 1 \\ 3 & 2 & 1 \end{bmatrix}$$

(*b*) Find the co-factor of the matrix

$$\begin{bmatrix} 2 & 3 \\ 5 & 9 \end{bmatrix}$$

(*c*) Given the function $y = f(x)$, what are the conditions of maximum.

(*d*) Compute the Marginal Utility (MU) of X

$$U = 4x^2 - 3y^2 - 3xy^9$$

(*e*) In a linear function AR (Average Revenue) function is given as

$$AR = P = a - bq$$

Find the slope of AR curve.

(*f*) From the cost function

$$C = 50 + 2Q + 7Q^2 + Q^3,$$

find the Total Fixed Cost (TFC).

(*g*) The production function is given as

$$Q = 3x^2 + 9x + 8.$$

Find the Average Product (AP).

(*Continued*)

(*h*) Given the Demand Function $Q_d = 100 - P$ and Supply Function as $Q_s = 50 + 4P$, determine the equilibrium price and output.

SECTION – B

Answer **all** questions : 16×4

2. (*a*) A three sector economy (primary, secondary and tertiary) has the following input-output coefficient matrix '*A*' and final demand factor '*F*' as follows :

$$A = \begin{bmatrix} 0{\cdot}3 & 0{\cdot}2 & 0{\cdot}2 \\ 0{\cdot}2 & 0{\cdot}1 & 0{\cdot}5 \\ 0{\cdot}2 & 0{\cdot}4 & 0{\cdot}2 \end{bmatrix} \quad F = \begin{bmatrix} 80 \\ 30 \\ 50 \end{bmatrix}$$

Find the gross output of each sector to meet the final demand.

Or

(*b*) Explain Input-Output Analysis by building a transaction table for a three sector economy showing inter-industry relations or the inter dependence of industries/sectors. Also, mention the uses of Input-Output Analysis.

(*Turn Over*)

3. (*a*) (*i*) Find the extreme values of the function

$$y = 15x^3 - 9x^2 - 8x$$

(*ii*) Find the first and second order partial derivatives of the following function :

$$U = x^2y^2 + x^5 + y^6$$

Also, verify that $\frac{d^2U}{dx \cdot dy} = \frac{d^2U}{dy \cdot dx}$.

Or

(*b*) Given the utility function $U = x^2 + 3xy - 5y^2$, price of commodity x is Rs. 2, price of commodity y is Rs. 3 and the consumer's money income is Rs. 6, find out the equilibrium level of consumption of x and y. Also, prove the condition for maximisation.

4. (*a*) Investigate the maximum or minimum values of the following function

$$Z = 48 - 4x^2 - 2y^2 + 16x + 12y$$

(*Continued*)

Or

(*b*) Given the revenue function and cost function as $R = 20q - q^2$ and $C = q^2 + 8q + 2$, find the equilibrium level of output, price, total revenue, total cost and profit.

5. (*a*) What is constrained optimisation ? How Lagrangian multiplier method helps finding optimum values under constraints ?

Or

(*b*) Given the Utility Function $U = f(q_1q_2) = q_1q_2$ and Budget constraint $4q_1 + 6q_2 = 96$, find the equilibrium quantities of q_1 and q_2 that will maximise the consumer's utility function.

Total Pages—3

AG ECO (02)

2018

(2nd Semester)

Time : 3 hours

Full Marks : 80

Answer from **both** the Sections as per directed

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(INDIAN ECONOMY)

SECTION – A

1. Answer *all* the questions : 2×8

   (*a*) What is Zamindari System ?

   (*b*) What is meant by ceiling on land holdings ?

   (*c*) What is industrial sickness ?

   (*d*) What is regional imbalance in industrial growth ?

(*Turn Over*)

(*e*) What is cross tariff system followed by Railways ?

(*f*) What is reserved money ?

(*g*) What is the main aim of NRHM (National Rural Health Mission) ?

(*h*) What is environmental accounting ?

SECTION – B

Answer **all** questions : 16 × 4

2. (*a*) Explain the causes of low productivity of agriculture.

Or

(*b*) Make a case for and against ceiling on land holdings.

3. (*a*) Explain the role and performance of small scale industries in India.

Or

(*b*) Critically examine the industrial policy of 1991.

4. (*a*) Explain why is road transport superior to railways and explain why railways be given protection against road competition.

Or

(*b*) Explain the changes in the composition and direction of exports and imports of our country since independence.

5. (*a*) Discuss the monetary policies of Reserve Bank of India (RBI).

Or

(*b*) Write notes on :

(*i*) Environment and Sustainable Development

(*ii*) Right to Education Act of 2009.

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2017

INTRODUCTORY MACROECONOMICS

Time : 3 Hours] [*Full Marks* : 80

Answer from **both** the Sections as directed. The figures in the right-hand margin indicate marks.

SECTION-A

1. Answer **all** questions: 2×8

(*a*) What is meant by the 'concept of flow'?

(*b*) What is Macrodynamic?

(*c*) What is GNP at factor cost?

(*d*) What is Weighted Index Number of Prices?

(*e*) Define 'fiat money'.

(*f*) What is cost-push inflation?

(*g*) What is M. E. C?

(*h*) What are the main components of Aggregate Demand in an economy?

SECTION-B

Answer **all** questions: 16×4

2. (*a*) Distinguish between microeconomics and macroeconomics. Discuss the main features of macroeconomics.

OR

(*b*) Explain the concept of circular flow of income in four sector model.

3. (*a*) Explain the Cambridge version of Quantity Theory of Money.

OR

(*b*) "The Keynesian theory of money is superior to Quantity theory of money." Explain.

4. (*a*) "Inflation is unjust, deflation is inexpedient, of the two perhaps deflation is worse." Explain.

OR

(*b*) Explain the Phillips curve hypothesis showing trade-off between inflation and unemployment.

5. (*a*) What is the concept of Investment Multiplier? Explain its working in the economy and what are the leakages of multiplier.

OR

(*b*) "Employment in the economy is determined by effective demand." Explain.

2017

MATHEMATICAL METHODS FOR ECONOMICS-II

Time : 3 Hours] [*Full Marks* : 80

Answer **all** questions. The figures in the right-hand margin indicate marks.

SECTION-A

1. Answer the following questions: 2×8

(*a*) Write the following equations in matrix form:

$$2x - 4y + 3z = 3$$
$$4x - 6y + 5z = 2$$
$$-2x + y - z = 1$$

(*b*) Find the cofactor of the matrix

$$\begin{bmatrix} 1 & 2 \\ 7 & 3 \end{bmatrix}$$

(*c*) Given the function $y = f(x)$. What are the conditions of minimum?

(*d*) If MR function is MR $= a - 2bq$, find the slope of MR curve.

(e) The cost function is $C = 10 + 2x + 13x^2$, find the marginal cost (MC).

(f) The production function is $Q = 3K + 2L$ (K = capital, L = labour and Q = output). Find the marginal productivity of labour.

(g) The total cost (TC) = $100 + 5Q$. What is the value of Total Variable Cost (TVC)?

(h) If AR is ₹ 40 and elasticity of demand is 5, find MR.

SECTION-B

Answer **all** questions: 16×4

2. (a) Calculate the output level of three-sector economy from the input coefficient matrix A and final demand factor D as stated below:

$$A = \begin{bmatrix} 0.3 & 0.4 & 0.2 \\ 0.2 & 0.0 & 0.5 \\ 0.1 & 0.3 & 0.1 \end{bmatrix}, \quad D = \begin{bmatrix} 100 \\ 40 \\ 50 \end{bmatrix}$$

OR

(b) What is input-output analysis? Show it through transaction matrix indicating mutual dependence among different sectors of the economy. Also, distinguish between closed and open model as well as static and dynamic model.

3. (a) (i) Investigate the maximum and minimum of the function

$$y = x^3 + 5x^2 + 8x + 5$$

(ii) Find the total differential of

$$z = \frac{x^2 + y^2}{x^2 - y^2}$$

OR

(b) Solve for consumer's equilibrium if utility function is $U = 8x_1x_2$, price of commodity x_1 is ₹ 2 and of x_2 is ₹ 6. The consumer's money income M = ₹ 30. Also prove the conditions of maximisation.

4. (a) Examine the maximum and minimum of the function

$$z = 3x^2 + y^2 - 3xy$$

OR

(b) Find firm's equilibrium and derive the level of output, price, total revenue, total cost and profit for $R = 12x - 4x^2$ and $AC = 8 - x$.

5. (a) Using Lagrangian multiplier method, find the values of x and y which maximise $Z = x^2 + 3xy - 6y$ subject to the constraint $x + y = 50$.

OR

(*b*) What is Optimisation? How the Lagrangian multiplier method is used for optimisation in constrained conditions?