

2013

ECONOMICS

(Major)

Paper : 3.2

(The Monetary System)

Full Marks : 80

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Answer the following questions : $1 \times 10 = 10$

- (a) What is meant by legal-tender money?
- (b) Define token money.
- (c) Mention one liability of commercial banks.
- (d) What is meant by overdraft facility of a commercial bank?
- (e) What is meant by 'letter of credit'?

- (f) Mention one important method of qualitative or selective credit control.
- (g) What is meant by cash reserve ratio?
- (h) What is meant by bank rate?
- (i) Mention one limitation of bank rate policy of the Central Bank.
- (j) Define stock market.

2. Answer the following questions : 2×5=10

- (a) Mention two functions of money.
- (b) Mention two characteristics of a 'money market'.
- (c) Define statutory liquidity ratio.
- (d) Bring out the meaning of financial system.
- (e) What is meant by stock market index?

3. Answer any *four* of the following questions in brief : 5×4=20

- (a) Distinguish between money and near money. Give the significance of near money. 3+2=5

- (b) What are the policy?

- (c) Explain the role of the custodian of foreign exchange.

- (d) Discuss in brief the rate policy of the Central Bank.

- (e) Explain briefly the financial market.

- (f) Write a note on the financial system.

4. Answer any *four* of the following questions in brief :

- (a) Discuss the significance of the modern economy.

- (b) Write a note on the commercial bank.

- (c) Discuss the various objectives of portfolio management and these objectives.

- (d) Discuss briefly the factors adopted by a bank to grant credit.

(4)

- (e) "A well-organised Central Bank controls the internal price level, stabilises the exchange rate and prevents the occurrence of financial and industrial crisis." How does a Central Bank achieve these objectives? 10
- (f) Discuss the promotional role of a Central Bank in a developing economy with special reference to RBI. 10
- (g) Discuss the importance of the financial system in an economy. Distinguish between money market and capital market. 7+3=10
- (h) Discuss the role of stock market in the economic development of a country. 10

2013

19.35

ECONOMICS

(Major)

Paper : 3.1

(Elementary Mathematics for Economics)

Full Marks : 80

Time : 3 hours

The figures in the margin indicate full marks
for the questions

1. Answer the following questions : $1 \times 10 = 10$

(a) If $U = \{5, 6, 7, 8, 9\}$ and $A = \{7, 8\}$, find the complement of A , i.e., \bar{A} .

(b) The set of all real numbers is greater than 8 but less than 73. Write in set notation.

(c) Differentiate between 'domain' and 'range' of a function.

(d) Give an example of rectangular hyperbola.

(e) Find the limit of the function

$$\lim_{x \rightarrow 1} f(x) = \lim_{x \rightarrow 1} \frac{1-x}{1-x^2}$$

(f) Define 'dimension' or 'order' of a matrix.

(g) Find the transpose of A , given

$$A = \begin{bmatrix} 1 & 0 & 9 \\ 6 & 1 & 2 \end{bmatrix}$$

(h) State the power rule of integration.

(i) Define rank of a matrix with example.

(j) Distinguish between a singular matrix and a nonsingular matrix.

2. Answer the following questions : $2 \times 5 = 10$

(a) If $A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} -1 & 2 \\ 2 & -1 \end{bmatrix}$, compute $2A - 3B$.

(b) State the conditions for equality of two matrices.

(c) If $C = 1000 + 6x + 0.5x^2$, where C is total cost and x is output, find marginal cost (MC).

(d) Given $A = \begin{bmatrix} 2 & 0 \\ 1 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} 4 & 0 \\ 5 & 1 \end{bmatrix}$, show that $(A+B)' = A'+B'$.

(e) Solve :

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3. Answer briefly and

(a) Prove that for

(i) $k(A+B)$

(ii) $(g+k)A$

(b) State the p

Given $y = \sqrt{x}$

(c) Find the de

$Y = f(x)$

using produ

(d) Find the co

(e) Given $y =$

find $\frac{\delta y}{\delta x_1}$ and

(f) Find AB , given

$$A = \begin{bmatrix} 3 & 0 & 1 \\ 2 & 2 & 3 \\ 4 & 1 & 2 \end{bmatrix} \text{ and } B = \begin{bmatrix} 5 & 1 & 2 \\ 2 & 2 & 1 \\ 4 & 1 & 3 \end{bmatrix}$$

4. Answer any four of the following : $10 \times 4 = 40$

(a) (i) A function is defined as follows :

$$\begin{aligned} f(x) &= 1, & x > 1 \\ &= 0, & x = 0 \\ &= -1, & x < 0 \end{aligned}$$

Show that the function is discontinuous at $x = 0$.

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(ii) State the conditions of continuity of a function. Differentiate between $f(a)$ and $\lim_{x \rightarrow a} f(x)$.

3+2=5

(b) Solve the following equation system by using Cramer's rule :

$$\begin{aligned} 2x_1 + x_2 + 3x_3 &= 15 \\ x_1 - 2x_2 + 5x_3 &= 13 \\ 4x_1 + 3x_2 - x_3 &= 11 \end{aligned}$$

10

(c) State five properties of determinants.

2×5=10

(d) Solve the following matrix inverse

$$Q_d =$$

$$Q_s =$$

$$Q_d =$$

(e) (i) State and differentiate

(ii) If $y = \frac{2x -}{x +}$ rule.

(f) (i) Find the

$$\int_1^3 (4x)$$

(ii) Given the function, the total $R(Q)$.

(g) Discuss the open input-output assumptions.

(h) Solve the input-output model $(I-A)X = F$ by using either matrix inversion or Cramer's rule, given

$$A = \begin{bmatrix} 0.2 & 0.2 & 0 \\ 0.3 & 0.2 & 0.4 \\ 0.2 & 0.3 & 0.1 \end{bmatrix}; \quad F = \begin{bmatrix} 100 \\ 220 \\ 150 \end{bmatrix} \quad 10$$
