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 : 1×10=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 r custodian of fo

(d) Discuss in brie rate policy of

(e) Explain brief financial mark

(f) Write a note financial syste

4. Answer any *four* of t

(a) Discuss the si modern econo

(b) Write a note commercial ba

(c) Discuss the va portfolio mana these objective

(d) Discuss briefly adopted by a credit.

(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

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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 : 1×10=10

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

(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 $\lim_{x \to 1} f(x) = \lim \frac{1-x}{1-x^2}$.

(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 : 2×5=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 $C = 1000 + 6x + 0 \cdot 5x^2$, 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 $(A+B)' = A' + B'$.

(Continued)

(e) Solve :

$\int$(

3. Answer briefly a

(a) Prove that fo

(i) $k(A+B)$

(ii) $(g+k)A$

(b) State the p
Given $y = \sqrt{}$

(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 : 10×4=40

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

$$f(x) = 1, \quad x > 1$$
$$= 0, \quad x = 0$$
$$= -1, \quad x < 0$$

Show that the function is discontinuous at $x = 0$. 5

(ii) State the conditions of continuity of a function. Differentiate between $f(a)$ and $\lim_{x \to a} f(x)$. 3+2=5

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

$$2x_1 + x_2 + 3x_3 = 15$$
$$x_1 - 2x_2 + 5x_3 = 13$$
$$4x_1 + 3x_2 - x_3 = 11$$

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(c) State five properties of determinants. 2×5=10

(Continued)

(d) Solve the follo
matrix inversio

Q_d =
Q_s =
Q_d =

(e) (i) State and
differentia

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

(f) (i) Find the

$\int_1^3 (4x$

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

(g) Discuss the
open input-o
assumptions.

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

$$A = \begin{bmatrix} 0 \cdot 2 & 0 \cdot 2 & 0 \\ 0 \cdot 3 & 0 \cdot 2 & 0 \cdot 4 \\ 0 \cdot 2 & 0 \cdot 3 & 0 \cdot 1 \end{bmatrix}; \quad F = \begin{bmatrix} 100 \\ 220 \\ 150 \end{bmatrix}$$

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