



UNIVERSITY OF NORTH BENGAL
B.A./B.Sc. Honours 2nd Semester Examination, 2020

CC4-ECONOMICS (204)
MATHEMATICAL METHODS FOR ECONOMICS-II

Full Marks: 60

ASSIGNMENT

The figures in the margin indicate full marks.

GROUP-A

Write any two assignments

20×2 = 40

1. Solve the following LPP using Simplex Method: 20
 Maximize $Z = 5x_1 + 3x_2$
 Subject to $x_1 + x_2 \leq 10$
 $3x_1 + 2x_2 \leq 12$
 $x_1, x_2 \geq 0$
2. Find the value of a game with the help of mixed strategy. 20
3. Explain the Cobweb model. 20
4. Find the time path of price for the following dynamic market model and examine the stability: 20
 $Q_d = 120 - 2P + 5.dP/dt$
 $Q_s = -30 + 3P + dP/dt$

GROUP-B

Write any two assignments

10×2 = 20

5. (a) Solve the equation $dy/dt + 2y = 6$, with the initial condition $y(0) = 10$. 5+5 = 10
 (b) Solve the equation $dy/dt + 4y = 0$, with the initial condition $y(0) = 1$.
6. Explain the concepts of two persons zero sum game, non-zero-sum game and saddle point in the theory of game. 3+3+4 = 10
7. Outline Domar's model of growth. 10
8. Given the following demand and supply functions find the intertemporal equilibrium price and determine whether the equilibrium is stable: 10
 $D_t = 18 - 3P^t$, $S^t = -3 + 4P_{t-1}$.

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