The Assam Royal Global University, Guwahati
Royal School of Humanities and Social Sciences
B.A. (H) Economics
Second Semester
Semester End Examination, August 2021
Course Title: Quantitative Methods for Economics - II
Course Code: ECO182C203

Time: 3 Hours   **Maximum Marks: 70**

Note: Attempt all questions as per instructions given.
The figures in the right-hand margin indicate marks.

Section – A

4. Attempt **any two** of the following: 7 x 2 = 14

   (a) Find out optimum solutions using graphical method-
       Maximize –
       $$\pi = 4x_1 + 3x_2$$
       Subject to
       $$x_1 + x_2 \leq 5$$
       $$3x_1 + 2x_2 \leq 12$$
       $$x_1 \geq 0, \ x_2 \geq 0$$

   (b) Find out optimum solutions using Simplex method-
       Minimize-
       $$C = 6x_1 + 3x_2$$
       Subject to
       $$x_1 + 2x_2 \geq 14$$
       $$x_1 + x_2 \geq 12$$
       $$3x_1 + x_2 \geq 18$$
       $$x_1 \geq 0, x_2 \geq$$

   (c) Explain the general formulation of linear programming problem of production.

5. Attempt **any two** of the following: 7 x 2 = 14

   (a) Answer the following-

       i.   Explain the importance of game theory in economics.

       ii. What is two-person zero-sum game?

   (b) Find out the value of the Game-

		Player-B

	Strategies	B1	B2	B3	B4
Player-A	A1	4	2	3	6
	A2	3	4	7	5
	A3	6	3	5	4

(c) Explain the concept of Prisoner's Dilemma.

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