

1. Which statement best describes a Normal Form Game?

- ☐ A Normal Form Game is a representation of a game where players' actions are listed alongside their payoffs, but it assumes sequential decision-making at each stage of the game.
- ☐ A Normal Form Game is a model that describes repeated interactions between players over multiple stages, focusing on the history of their actions.
- ☐ A Normal Form Game is a representation of a strategic interaction where each player's actions and corresponding payoffs are displayed in a matrix, assuming simultaneous decision-making
- ☐ A Normal Form Game is a representation of a game where the payoffs depend solely on the order of moves rather than the players' chosen actions.

2. Which of the following games is zero-sum?

- ☐
 - There are two players.
 - Each player can choose 1 of three actions: $\mathcal{A}_1 = \mathcal{A}_2 = \{A, B, C\}$
 - For any choices made by all the players they all get a payoff of 0.
- ☐
 - There is 1 player.
 - $\mathcal{A}_1 = \{1, 2, \dots\}$
 - $u_1(1) = -u_1(2) = u_1(3) = -u_1(4) = 1$ for all $A \in \mathcal{A}_1$
- ☐ Rock Paper Scissors but if both players choose Rock then they both win.

3. Which of the matrix representations corresponds to the following game:

It has snowed on the road leading to two neighbours' houses. Each neighbour can either wait for the other to shovel the snow or shovel the snow. If they both wait then the road is not cleared. They would both prefer to not shovel.

☐

$$A = \begin{pmatrix} 5 & 6 \\ 4 & 0 \end{pmatrix} \quad B = \begin{pmatrix} 5 & 4 \\ 6 & 0 \end{pmatrix}$$

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