Consider the following game (a variant of BoS)

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>3, 1</td>
<td>0, 0</td>
<td>-1, 2</td>
</tr>
<tr>
<td>S</td>
<td>0, 0</td>
<td>1, 3</td>
<td>0, 2</td>
</tr>
</tbody>
</table>

1. Strictly dominated action of player 1 is
   a. B
   b. S
   c. Neither
   d. Can’t be determined

2. Action B of player 2 is strictly dominated by
   a. X
   b. S
   c. Both
   d. None

3. The action pair that survives the iterated elimination of strictly dominated strategies is
   a. (B, S)
   b. (B, X)
   c. (B, B)
   d. (S, S)

Consider the following game (a variant of BoS)

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<tbody>
<tr>
<td>B</td>
<td>4, 3</td>
<td>0, 0</td>
<td>2, 1</td>
</tr>
<tr>
<td>S</td>
<td>0, 0</td>
<td>3, 4</td>
<td>1, 1</td>
</tr>
</tbody>
</table>

4. Action X of the player 2 is dominated by
   a. B
   b. S
   c. mixed strategies that assigns positive probabilities to B and S
   d. None

In the variant of Hotelling’s linear market model that captures competing firms choices of product characteristics as per the consumers’ likings. There is a continuum of consumers (uniformly distributed over [0,1]), each with a favorite characteristic liking
5. When there are two firms
   a. There will be infinitely many Nash Equilibria over [0,1]
   b. There will be no Nash Equilibrium
   c. There will be finitely any Nash Equilibria over [0, 1]
   d. There will be unique Nash Equilibria (1/2, 1/2)

6. When there are three firms
   a. There will be infinitely many Nash Equilibria over [0,1]
   b. There will be no Nash Equilibrium
   c. There will be finitely any Nash Equilibria over [0, 1]
   d. There will be unique Nash Equilibria (1/3, 1/3, 1/3)

Consider the following second price sealed bid auction scenario. Two individuals A and B are competing in an auction to obtain a valuable object. The bids must be in multiples of INR 100 and the maximum that they can bid is INR 500. The valuations of the object to individual A and B are INR 400 and INR 300 respectively. Write down the strategic form of the game (In case of a tie, individual A gets the object)

7. What is the value of payoffs corresponding to actions of both players when they bid their maximum valuation
   a. (0, 0)
   b. (400, 0)
   c. (0, 300)
   d. (100, 0)

8. Which one of the following is a Nash Equilibrium of this game
   a. (0, 0)
   b. (100, 0)
   c. (200, 100)
   d. (400, 300)

9. This game has
   a. A unique Nash Equilibrium
   b. Infinitely many Nash Equilibria
   c. Finitely many Nash Equilibria
   d. Two Nash Equilibria

10. Which action is not weekly dominated for individual A
    a. 0
    b. 300
    c. 100
    d. 500

11. Which action is not weekly dominated for individual B
    e. 0
    f. 500
    g. 400
    h. 100
Now consider the same auction in First price sealed bid auction scenario and answer following questions

12. What is the value of payoffs corresponding to actions of both players when they bid their maximum valuation
   a. (0, 0)
   b. (400, 0)
   c. (0, 300)
   d. (100, 0)

13. Which one of the following is a Nash Equilibrium of this game
   a. (0, 0)
   b. (400, 300)
   c. (200, 200)
   d. (300, 200)

Consider the following Entry Game as discussed in the lecture. Here Coke has to decide whether it wants to enter the market (In) or to remain out (Out) whereas the incumbent (Pepsi) has to decide whether it will fight (F) or accommodate coke (A)

![Entry Game Diagram]

**Figure: Entry game**

14. What are the pure strategy Nash Equilibria of the normal form game corresponding to this entry game
   a. (In, A)
   b. (Out, F)
   c. Both
   d. None

15. What is the equilibrium of this game by the technique of backward induction
   a. (In, A)
   b. (Out, F)
   c. Both
   d. None