A. Both games have two NEs viz. (X, X) and (Y, Y).
   1. Answer: (c)
   2. Answer: (c)

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Game 1

Game 2

X is an evolutionary stable action in both games but Y is evolutionary stable only in second game.

3. Answer: (c)
4. Answer: (a)

B. This game has no symmetric pure strategy equilibrium but it has a unique symmetric mixed strategy equilibrium in which each player’s strategy assigns probability 2/3 to L.

5. Answer: (d)
6. Answer: (a)
7. Answer: (b)

C. This game has a unique NE (D, D)

8. Answer: (b)

If we apply backward induction, in last period D is dominant strategy regardless of history of game so the last period sub game has (D, D) as equilibrium. This is repeated to the previous sub game and it is easy to see that in any finitely repeated game (D, D) is the SPNE.

9. Answer: (b)
10. Answer: (b)
11. Answer: (b)

In infinitely repeated games there are multiple equilibriums depending upon discount factor. Suppose players use following grim trigger strategy in infinitely repeated prisoners’ dilemma game

a. Play C unless someone ever played D in the past
b. Play D forever if someone has played D in past

12. Answer: (b)
13. Answer: (c)
14. Answer: (b)