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1) What is the goal of Deep Reinforcement Learning (DRL)?

- a) To maximize the return by ^{taking} optimal actions
- b) To minimize " " "baking" " "
- c) To satisfy decision constraints " " "
- d) None.

2) Assume that in a private cloud scenario, the edge has 40 VMs available initially. A customer demands 30 VMs for 2 timeslots. If the agent takes an action with the values $\cdot 0.5$, then how many VMs would be left at the edge at the end of first time-slot?

a) 10

☒ b) 25

c) 35

d) 20

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3) In the DDPG algorithm, noise is added to actions chosen by the actor to —

- a. Promote sub-optimal actions
- b. Increase convergence speed
- ✓ c. Promote exploration
- d. None

4. Which of the following is true with regard to a "soft-update" of target parameters in DDPG?

(Compare options)

✓ a. Soft-updates involves updating parameters of target network with a weighted sum of base & target network.

b. Soft-updates involves updating directly from target network to the base network

c. Soft-updates involves updating directly from base network to target network

d. All of them, Soft-updating involves

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parameters of base network with a weighted sum of base & target.

5. In DDPG, which of the following is true about the critic network?

- ☒ a. Estimates the value function
- ☐ b. Estimates the policy
- ☒ c. Uses the actor's current action to compute (current) Q -values
- ☒ d. Uses MSE loss between current Q -values & target Q -values.

6. In DDPG, which of the following ^{is true} about the actor network?

- ☐ a. Estimates the value-function
- ☒ b. Estimates the policy
- ☒ c. Uses the critic's Q -value to compute loss (or its gradient)
- ☐ d. Uses MSE loss between current Q -values & target Q -values.

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7. In AWS, — are designed as independent failure zones that are physically separated.

- a. Regions
- ☒ b. Availability zones
- c. Edge Locations
- d. None

8. In a ~~traditional~~ traditional asynchronous replication between distant data centers, committing data to storage (SSD) is not fast enough & therefore poses a challenge. The statement is

- ☒ a) True
- ☒ b) False

9. Which of the following provides compute capacity for AWS?

- a. S3
- ☒ b. EC2
- c. SES

10. Which of the following provides DNS services to AWS?

- ☒ a. Route 53
- b. EC2
- c. S3