

Started on	Wednesday, 27 September 2023, 6:37 PM
State	Finished
Completed on	Wednesday, 27 September 2023, 7:18 PM
Time taken	40 mins 40 secs
Grade	10.00 out of 10.00 (100%)

Question 1

Flag questionMark 1.00 out of 1.00Correct

TD(0) estimate of discrete (tabular) state value function V is guaranteed to converge to the true value.

Select one:

☒ True

☐ False

The correct answer is 'True'.

Question 2

Flag questionMark 1.00 out of 1.00Correct

Tabular methods allow handling larger state spaces than function approximation methods.

Select one:

☐ True

☒ False

The correct answer is 'False'.

Question 3

Flag questionMark 1.00 out of 1.00Correct

Function approximation can be used to model state-value functions.

Select one:

☒ True

☐ False

The correct answer is 'True'.

Question 4

Flag questionMark 1.00 out of 1.00Correct

Function approximation can be used to model action-value functions.

Select one:

☒ True

☐ False

The correct answer is 'True'.

Question 5

Flag questionMark 1.00 out of 1.00Correct

Neural network approximation of action-value function is guaranteed to converge to global optimum with MC approach.

Select one:

☐ True

☒ False

The correct answer is 'False'.

Question 6

Flag questionMark 1.00 out of 1.00Correct

Neural network approximation of action-value function is guaranteed to converge to global optimum with SARSA.

Select one:

☐ True

☒ False

The correct answer is 'False'.

Question 7

Flag questionMark 1.00 out of 1.00Correct

Consider value function approximation with $V(s) = as^2 + bs + c$.
You have observed the following state-return pairs:
 $s = 0, G = 0$
 $s = 1, G = 1$
 $s = 2, G = 0$
The parameters of the function approximation are to be estimated by least squares.
What is the estimated value for state V(3)?
Please note that G denotes returns = the cumulative rewards.

Answer:

The correct answer is: -3

Question 8

Flag questionMark 1.00 out of 1.00Correct

Consider a problem with action space $A = a, b$ and a one-dimensional continuous state space $S = R$.
You have currently action-value approximations
 $Q(s, a) = -s + 2$
 $Q(s, b) = s - 1$
 $Q(s, c) = -s^2 + 1$
Which action is taken in state $x = 2$?

Select one:

☐ a.

☒ b.

☐ c.

Your answer is correct.
The correct answer is: b

Question 9

Flag questionMark 1.00 out of 1.00Correct

In experience replay, agent's experiences are stored and used repeatedly during learning.

Select one:

☒ True

☐ False

The correct answer is 'True'.

Question 10

Flag questionMark 1.00 out of 1.00Correct

Experience replay can be used with on-policy approaches such as SARSA.

Select one:

☐ True

☒ False

The correct answer is 'False'.

Finish review