REINFORCEMENT LEARNING

1. Reinforcement learning is a _____

Prediction-based learning technique

Feedback-based learning technique

History results-based learning technique

Answer: B) Feedback-based learning technique

2. How many types of feedback does reinforcement provide?

1

2

3

4

Answer: B) 2

3. Which kind of data does reinforcement learning use?

Labeled data

Unlabelled data

None

Both

Answer: C) None

4. Reinforcement learning methods learned through ____?

Experience

Predictions

Analyzing the data

Answer: A) Experience

5. How many types of machine learning are there?

2

3

4

5

Answer: C) 4

6. Which of the following is the practical example of reinforcement learning?

House pricing prediction

Market basket analysis

Text classification

Driverless cars

Answer: D) Driverless cars

7. What is an agent in reinforcement learning?

Agent is the situation in which rewards are being exchanged

Agent is the simple value in reinforcement learning.

An agent is an entity that explores the environment.

Answer: C) An agent is an entity that explores the environment.

8. What is the environment in reinforcement learning?

Environment is a situation that is based on the current state

Environment is a situation in which an agent is present.

Environment is similar to feedback

Environment is a situation that the agent returns as a result.

Answer: B) Environment is a situation in which an agent is present.

9. What are actions in reinforcement learning?

Actions are the moves that the agent takes inside the environment.

Actions are the function that the environment takes.

Actions are the feedback that an agent provides.

Answer: A) Actions are the moves that the agent takes inside the environment.

10. What is the state of reinforcement learning?

State is a situation in which an agent is present.

A state is the simple value of reinforcement learning.

A state is a result returned by the environment after an agent takes an action.

Answer: C) A state is a result returned by the environment after an agent takes an action.

11. What are the Rewards of Reinforcement learning?

An agent's action is evaluated based on feedback returned from the environment.

Environment gives value in return which is known as a reward.

A reward is a result returned by the environment after an agent takes an action.

Answer: A) An agent's action is evaluated based on feedback returned from the environment.

12. What is the Policy in reinforcement learning?

The agent's policy determines what environment model should be decided

The agent's policy determines what action to take based on the current state.

The agent's policy determines what the state reward would be.

Answer: B) The agent's policy determines what action to take based on the current state.

13. Does reinforcement learning follow the concept of the Hit and try method?

Yes

No

Answer: A) YES

14. In how many ways can you implement reinforcement learning?

2

3

4

5

Answer: B) 3

15. In which of the following approaches of reinforcement learning, do we find the optimal value function?

Value-based

Policy-based

Model-based

Answer: A) Value-based

16. How many types of policy-based approaches are there in reinforcement learning?

1

2

3

4

Answer: B) 2

17. In which of the following approaches of reinforcement learning, a virtual model is created for the environment?

Value-based

Policy-based

Model-based

Answer: C) Model-based

18. _____is a synonym for random and probabilistic?

Deterministic

Stochastic

Answer: B) Stochastic

19. How many elements does reinforcement learning consist of?

2

3

4

5

Answer: C) 4

20. The agent's main objective is to ____the total number of rewards for good actions.?

Minimize

Maximize

Null

Answer: B) Maximize

21. Reinforcement learning is defined by the ____?

Policy

Reward Signal

Value Function

Model of the environment

Answer: B) Reward Signal

22. Which element in reinforcement learning defines the behavior of the agent?

Policy

Reward Signal

Value Function

Model of the environment

Answer: A) Policy

23. Can reward signals change the policy?

Yes

No

Answer: A) YES

24. On which of the following elements of reinforcement learning, the reward that an agent can expect is dependent?

Policy

Reward Signal

Value Function

Model of the environment

Answer: C) Value Function

25. Which of the following elements of reinforcement learning imitates the behavior of the environment?

Policy

Reward Signal

Value Function

Model of the environment

Answer: D) Model of the environment

26. The approach in which reinforcement learning problems are solved with the help of models is known as ____?

Model-based approach

Model-free approach

Model known approach

Answer: A) Model-based approach

27. Who introduced the Bellman equation?

Richard Ernest Bellman

Alfonso Shimbel

Edsger W. Dijkstra

Answer: A) Richard Ernest Bellman

28. Gamma (γ) in the bellman equation is known as?

Value factor

Discount factor

Environment factor

Answer: B) Discount factor

29. How many types of reinforcement learning?

3

4

2

5

Answer: C) 2

30. In which of the following types of reinforcement learning do we add something that increases the likelihood of repeating expected behavior?

Positive Reinforcement

Negative Reinforcement

Answer: A) Positive Reinforcement

31. How do you represent the agent state in reinforcement learning?

Discount state

Discount factor

Markov state

Answer: C) Markov state

32. P[St+1 | St] = P[St +1 | S1,....., St], in this condition

What is the meaning of St?

State factor

Discount factor

Markov state

Answer: C) Markov state

33. What do you mean by MDP in reinforcement learning?

Markov discount procedure

Markov discount process

Markov deciding procedure

Markov decision process

Answer: D) Markov decision process

34. Why do we use MDP in reinforcement learning?

We use MDP to formalize the reinforcement learning problems.

We use MDP to predict reinforcement learning problems.

We use MDP to analyze the reinforcement learning problems.

Answer: A) We use MDP to formalize the reinforcement learning problems.

35. How many tuples does MDP consist of?

2

3

4

5

Answer: C) 4

36. Which of the following algorithms will find the best course of action, based on the agent's current state, without using a model and off-policy reinforcement learning?

Q-learning

Markov property

State action reward state action

Deep Q neural network

Answer: A) Q-learning

37. What do you mean by SARSA in reinforcement learning?

State action reward state action

State achievement rewards state action

State act reward achievement

State act reward act

Answer: A) State action reward state action

38. ___is the policy that an agent is trying to learn?

behavior policy

Target policy

On-policy

Off-policy

Answer: B) Target policy

39. ____- is the policy which is used by an agent for action selection?

behavior policy

Target policy

On-policy

Off-policy

Answer: A) behavior policy

40. Which of the following type of policy is a learning algorithm in which the same policy is improved and evaluated?

behavior policy

Target policy

On-policy

Off-policy

Answer: C) On-policy

41. Which of the following types of policy is a learning algorithm that evaluates and improves a policy that is dissimilar from the Policy that is used for action selection?

behavior policy

Target policy

On-policy

Off-policy

Answer: D) Off-policy

42. Among On-policy and off-policy, which of the following target policy is not equal to behavior policy?

On-policy

Off-policy

Answer: B) Off-policy

43. Among On-policy and off-policy, which of the following target policy is equal to behavior policy?

On-policy

Off-policy

Answer: A) On-policy

44. Q-learning follows an on-policy learning algorithm or an off-policy learning algorithm?

On-policy

Off-policy

Answer: B) Off-policy

45. SARSA follows an on-policy learning algorithm or an off-policy learning algorithm?

On-policy

Off-policy

Answer: A) On-policy

46. What is DQN in reinforcement learning?

Dynamic Q-learning network

Dynamic Q-neural network

Deep Q-neural network

Answer: C) Deep Q-neural network

47. Which of the following correctly states the difference between Q-learning and SARSA?

In comparison to SARSA, QL directly learns the optimal policy, whereas SARSA learns a policy that is "near" the optimal

In comparison to QL, SARSA directly learns the optimal policy, whereas QL learns a policy that is "near" the optimal.

Answer: A) In comparison to SARSA, QL directly learns the optimal policy, whereas SARSA learns a policy that is "near" the optimal

48. Which of the following gives the better final performance?

QL

SARSA

Answer: A) QL

49. Which of the following is faster?

QL

SARSA

Answer: B) SARSA

50. Q-learning is a model-free or model-based learning algorithm?

Model-free

Model-based

Answer: A) Model-free

51. What does Q stand for in Q-learning?

Quality

Query

Quantify

Quick

Answer: A) Quality

52. The matrix created during the Q-learning algorithm is commonly known as ____?

Query-table

Q-table

Quick-matrix

Table

Answer: B) Q-table

53. Does reinforcement learning provide any previous training?

Yes

No

Answer: B) NO

54. Q-learning works on which equation?

Naïve bayes equation

KNN-equation

Bellman-equation

Answer: C) Bellman-equation