Assignment 8

The due date for submitting this assignment has passed. Due on 2018-04-04, 23:59 IST.
As per our records you have not submitted this assignment.

1) A planning operator

- is an operator who makes a plan.
- specifies an action along with its preconditions and effects
- may have variables which can be bound to domain objects.
- may have variable that can be bound to domain predicates

No, the answer is incorrect.
Score: 0
Accepted Answers:
- specifies an action along with its preconditions and effects
- may have variables which can be bound to domain objects.

2) The preconditions in a planning action

- specify the actions that must be done before the operator is applied
- specify the predicates that must hold for the operator to be applicable
- specify the initial conditions of the start state.
- none of the above.

No, the answer is incorrect.
Score: 0
Accepted Answers:
- specify the predicates that must hold for the operator to be applicable

3) In the STRIPS planning domain

- actions are always instantaneous
- actions can be durative
- actions are always durative.
- the agent is the only one changing the world.
- is a multi-agent planning domain

No, the answer is incorrect.
Score: 0
Accepted Answers:
- actions are always instantaneous
- the agent is the only one changing the world.

4) In the STRIPS planning domain

- the world is completely observable.
lookback, Learning

Week 7: Model based systems, Model based diagnosis, Truth maintenance systems

Week 8: Planning as CSP, Planning as SAT, Wrapping up

Lecture 1: Planning as Constraint Satisfaction

Lecture 2: Planning as Constraint Satisfaction (cont.)

Lecture 3: Planning as Satisfiability

Lecture 4: Wrapping Up and Further Study

Quiz : Assignment 8

Week 8 Feedback

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Lecture slides

Solutions

Interactive Session

- the world is partially observable
- actions are always deterministic
- actions may sometimes be stochastic
- actions are always stochastic

No, the answer is incorrect.
Score: 0
Accepted Answers:
the world is completely observable.
actions are always deterministic

5) An advantage of Backward State Space Planning over Forward State Space Planning is

- that the plan found is always correct
- that the plan found may be spurious.
- that the branching factor for search is low
- that the branching factor for search is high

No, the answer is incorrect.
Score: 0
Accepted Answers:
that the branching factor for search is low

6) A disadvantage of Backward State Space Planning over Forward State Space Planning is

- that the plan found is always correct.
- that the plan found may be spurious.
- that the branching factor for search is low.
- that the branching factor for search is high.

No, the answer is incorrect.
Score: 0
Accepted Answers:
that the branching factor for search is low

7) If the above problem is solved as DCSP, which of the following are the initial set of constraints that denote the active propositions?

No, the answer is incorrect.
Score: 0
Accepted Answers:

8) Which of the following are true about the initial state in the state variable representation

No, the answer is incorrect.
Score: 0
Accepted Answers:

9) Which of the following constraints denote the frame axioms for the given domain

No, the answer is incorrect.
Score: 0
Accepted Answers:
10) Which of the following formulas are valid encoding of actions as clauses in SAT

- UnStack(D, B, 0) ∧ PickUp(A, 0)
- UnStack(D, B, 0) ∧ PickUp(C, 0)
- ¬UnStack(D, B, 0) ∨ ¬PickUp(C, 0)
- ¬UnStack(D, B, 0) ∨ ¬PickUp(A, 0)

No, the answer is incorrect.
Score: 0
Accepted Answers:

11) Which of the following formulas denote the action that are mutex while encoding the planning graph as SAT

- ¬UnStack(D, B, 0) ∨ ¬PickUp(C, 0)
- ¬UnStack(D, B, 0) ∨ ¬PickUp(A, 0)

No, the answer is incorrect.
Score: 0
Accepted Answers:

12) In a k-SAT problem the prefix “k”

- stands for the number of logical connectives
- stands for the number of variables in the problem
- stands for the number of clauses in the problem
- stands for the number of literals in each clause in the problem

No, the answer is incorrect.
Score: 0
Accepted Answers:

13) Comparing 2-SAT problems with 3-SAT problems

- we observe that both of of similar computational complexity
- the complexity of 3-SAT is marginally higher than that of 2-SAT
- the complexity of 3-SAT is significantly higher than that of 2-SAT
- we cannot make general comments on their complexity

No, the answer is incorrect.
Score: 0
Accepted Answers:

14) For 3-SAT problems as the number of variables increases

- the probability of finding a solution remains constant.
- the probability of finding a solution decreases gradually
No, the answer is incorrect.

Score: 0

Accepted Answers:
the probability of finding a solution drops suddenly at an inflection point.

No, the answer is incorrect.

Score: 0

Accepted Answers:
specifies the relations between two time intervals
specifies qualitative constraints between two time intervals