

Survey 10

* Required

1. Please give your name *

2. Please give your CUHK student ID *

3. How much of Assignment 9 have you completed? *

Mark only one oval.

- ☐ What? There is an assignment!?
- ☐ Seen it.
- ☐ Thought about it.
- ☐ Tried it.
- ☐ Finished it!!

4. How many Course 3 Module 2 lectures have you watched? *

Mark only one oval.

- ☐ None
- ☐ 1
- ☐ 2-3
- ☐ All

5. What are covered in Module 2? You can tick more than one. *

Check all that apply.

- ☐ Global constraints
- ☐ Propagators
- ☐ Propagation Engine
- ☐ Basic search
- ☐ Variable ordering
- ☐ Value ordering
- ☐ Branch and Bound
- ☐ Restart search
- ☐ Conflict-driven search strategies

6. Which of the following can solve a discrete optimization problem? You can take more than one. *

Check all that apply.

- ☐ Basic search + propagation + retry
- ☐ Branch and Bound search
- ☐ Branch and Branch search
- ☐ Retry and test
- ☐ Generate and test by trying all possible combinations of variable assignments

7. In Branch and Bound search, what aspects of the search tree is affected by variable choices (assuming value ordering remains unchanged)? You can tick more than one. *

Check all that apply.

- ☐ The height
- ☐ The size
- ☐ The width
- ☐ The shape
- ☐ The ordering of the levels
- ☐ The ordering of the branches
- ☐ The ordering of the solutions
- ☐ The number of root nodes
- ☐ The number of internal nodes
- ☐ The number of leave nodes

8. In Branch and Bound search, what aspects of the search tree is affected by value choices (assuming variable ordering remains unchanged)? You can tick more than one. *

Check all that apply.

- ☐ The height
- ☐ The size
- ☐ The width
- ☐ The shape
- ☐ The ordering of the levels
- ☐ The ordering of the branches
- ☐ The ordering of the solutions
- ☐ The number of root nodes
- ☐ The number of internal nodes
- ☐ The number of leave nodes

9. Which of the following search strategies do not work with restart? You can tick more than one. Think about why! *

Check all that apply.

- ☐ Variable: input_order Value: indomain_random
- ☐ Variable: dom_w_deg Value: indomain_random
- ☐ Variable: first_fail Value: indomain_median
- ☐ Variable: first_fail Value: dom_w_deg
- ☐ Variable: dom_w_deg Value: indomain_median

10. Which of the following is a reason for using global constraints? You can tick more than one. *

Check all that apply.

- ☐ Global constraints usually have beautiful names
- ☐ Global constraints give a more succinct expression of the conditions in the problem
- ☐ Global constraints give a more flexible model
- ☐ Global constraints usually have an efficient implementation of the associated propagators
- ☐ Global constraints usually have different implementations of the associated propagators

11. What is the secret behind the implementation of a global constraint propagator? *

Mark only one oval.

- ☐ A linear time algorithm for enforcing domain consistency
- ☐ A quadratic time algorithm for enforcing the strongest bounds consistency
- ☐ A polytime algorithm for pruning variable domains
- ☐ A polytime algorithm for enforcing domain consistency
- ☐ A polytime algorithm for enforcing the strongest bounds consistency

12. Which of the following is a reason for not implementing a domain or strongest bounds propagator for a global constraint? *

Check all that apply.

- ☐ Enforcing domain or strongest bounds consistencies is too expensive
- ☐ Enforcing domain or strongest bounds consistencies is too efficient
- ☐ Enforcing domain or strongest bounds consistencies is the same
- ☐ Difficult to decide which one is better
- ☐ Domain propagator is stronger than the strongest bounds propagator

13. Have you attempted Workshop 10 yet? *

Mark only one oval.

- ☐ No
- ☐ Thought about it
- ☐ Completed it

14. How much of Assignment 10 have you completed? *

Mark only one oval.

- ☐ What? There is another ASSIGNMENT!?
- ☐ Seen it.
- ☐ Thought about it.
- ☐ Tried it.
- ☐ Finished it!!