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Courses » Computational Systems Biology

Announcements

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Unit 15 - Week 11

Course outline

How to access the portal

Pre-requisite Assignment

MATLAB Access and Introduction

MATLAB Learning Modules

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Week 11

Assignment 11

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

Due on 2018-10-17, 23:59 IST.

1) If the system starts with initial condition $A = 1$, $B = 0$, $C = 1$. Assuming a synchronous update, which of the following represents the correct truth table? **1 point**

1	0	1
1	0	0
1	0	0
1	1	0
0	1	0
0	1	1
1	0	1

1	0	1
1	0	0
0	1	1
0	0	0
0	1	1
0	0	1
1	0	0

1	0	1
1	0	0
1	1	0
1	1	0
0	0	1
0	0	0
0	0	1

1	0	1
1	0	0

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solution

Week 12

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No, the answer is incorrect.

Score: 0

Accepted Answers:

1	0	1
1	0	0
1	1	0
0	1	0
0	1	1
0	0	1
1	0	1

2) The cycle attractor for the system shown above is

1 point

- ☐ 1 0 1
- ☐ 0 1 1
- ☐ 1 1 0
- ☐ 0 0 1

No, the answer is incorrect.

Score: 0

Accepted Answers:

1 0 1

3) Systems exhibiting higher robustness are

1 point

- ☐ Least evolvable and more prone to innovation
- ☐ Highly evolvable and more prone to innovation
- ☐ Least evolvable and less prone to innovation
- ☐ Highly evolvable and less prone to innovation

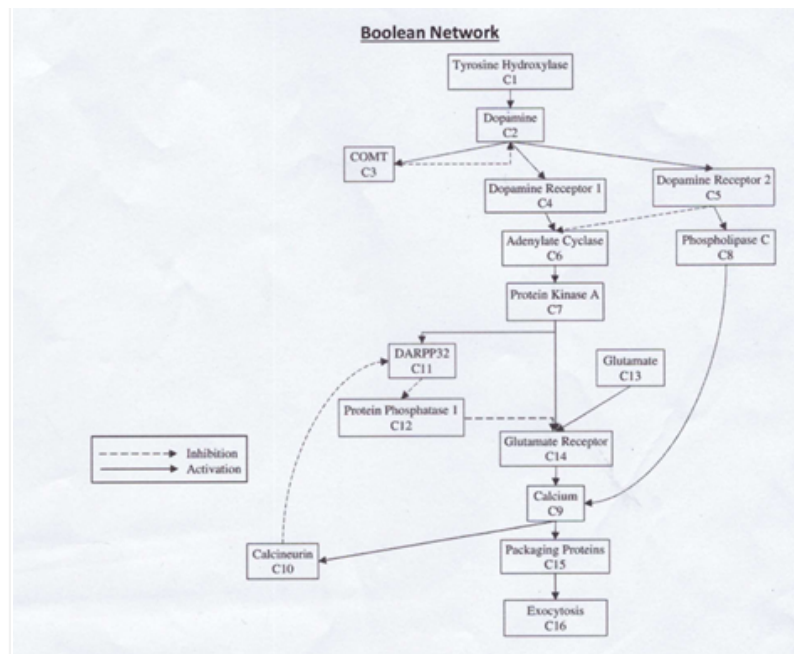
No, the answer is incorrect.

Score: 0

Accepted Answers:

Highly evolvable and more prone to innovation

4) Encode the Boolean transfer functions and simulate them to understand the evolution of the states using synchronous update for the following condition given and answer the following questions: **3 points**



Condition – All ON

Steady state oscillations are obtained at

- ☐ 3s
☐ 4s
☐ 5s
☐ 2s

No, the answer is incorrect.

Score: 0

Accepted Answers:

4s

5) Based on the data given in the question 4 answer this question.

3 points

Condition – All off, except Glutamate

Under this condition, the system

- ☐ Oscillates and returns to the original state in 5s
☐ Oscillates but does not have a cycle attractor
☐ Oscillates and returns to the original state in 4s
☐ Does not oscillate

No, the answer is incorrect.

Score: 0

Accepted Answers:

Does not oscillate

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