

Unit 5 - Week 2

Course outline

How does an NPTEL online course work?

Prerequisite Assignment

MATLAB

Week 1

Week 2

13 - Introduction to Networks

14 - Introduction to Networks

15 - Introduction to Network Biology

16 - Introduction to Network Biology

17 - Introduction to Network Biology

18 - Network Biology

19 - Network Models

20 - Network Models

Quiz : Practice Assignment 2

Quiz : Assignment 2

Computational Systems Biology : Week 2 Feedback Form

Week 3

week 4

Week 5

Week 6

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Week 12

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Assignment 2

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2020-02-12, 23:59 IST.

Multiple Select Questions: One or more Correct Answers

- 1) The degree distribution of a scale-free network is represented by ____
- A Gaussian
 - A randomly fluctuating graph
 - A straight line in logarithmic scale
 - None of the above

No, the answer is incorrect. Score: 0

Accepted Answers: A straight line in logarithmic scale

1 point

- 2) Which of the following ways can be used to represent a graph?

- Adjacency List
- Incidence Matrix
- Adjacency Matrix
- None of the above

No, the answer is incorrect. Score: 0

Accepted Answers: Adjacency List Incidence Matrix Adjacency Matrix

1 point

- 3) Clustering coefficient is a characteristic of a __ and is a measure of __

- Node, fraction of edges between nodes of different types
- Network, number of connections each node has
- Node, proportion of neighbours of a node that are connected
- Network, number of shortest paths passing through a node

No, the answer is incorrect. Score: 0

Accepted Answers: Node, proportion of neighbours of a node that are connected

1 point

- 4) Which of the following is/are NOT a node property?

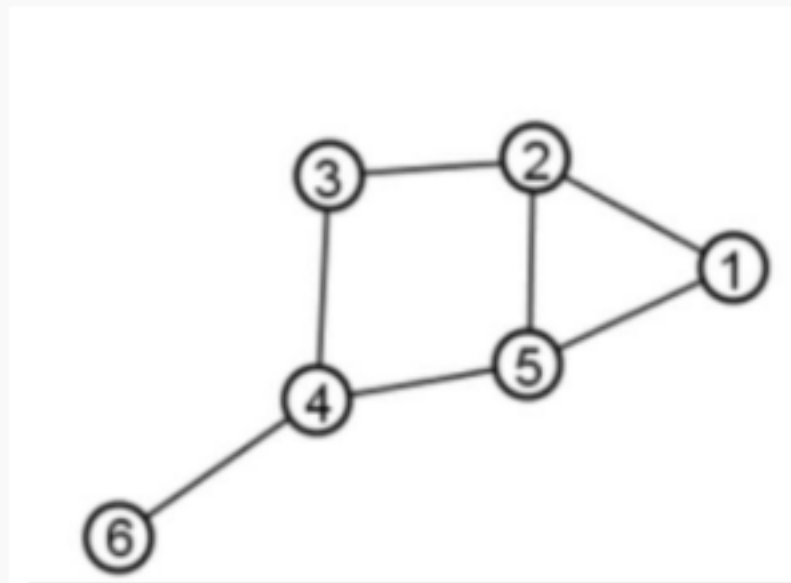
- Degree
- Clustering coefficient
- Betweenness centrality
- Characteristic path length

No, the answer is incorrect. Score: 0

Accepted Answers: Characteristic path length

1 point

Numerical questions : Enter the answer in the text box:



Answer the 5-9 questions from the following graph

- 5) Degree of node 5 _____

No, the answer is incorrect. Score: 0

Accepted Answers: (Type: Numeric) 3

1 point

- 6) Number of connected components _____

No, the answer is incorrect. Score: 0

Accepted Answers: (Type: Numeric) 1

1 point

- 7) Betweenness centrality of node 4 _____(Round off the answer upto 2 decimals points)

No, the answer is incorrect. Score: 0

Accepted Answers: (Type: Range) 0.40,0.50

1 point

- 8) Average clustering coefficient of the network _____(Round off the answer upto 2 decimals points)

No, the answer is incorrect. Score: 0

Accepted Answers: (Type: Range) 0.27,0.28

1 point

- 9) Diameter of the network _____

No, the answer is incorrect. Score: 0

Accepted Answers: (Type: Numeric) 3

1 point

- 10) A random network is constructed such that a pair of nodes are connected with a probability of 0.4. What is the expected number of possible edges if there are 100 nodes?

No, the answer is incorrect. Score: 0

Accepted Answers: (Type: Numeric) 1980

1 point