PageRank and Recent Advances

Quiz, 9 questions

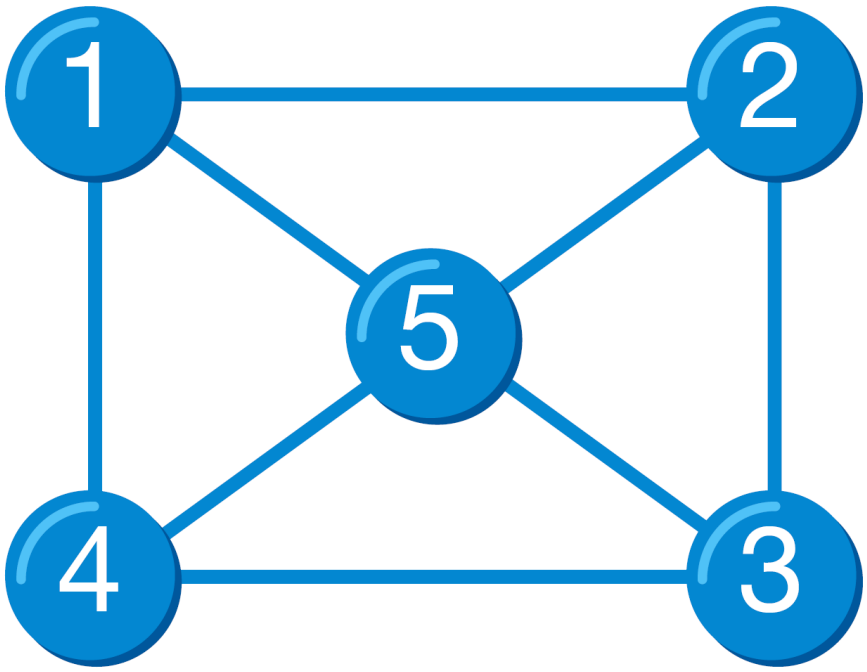
9/9 points (100.00%)

Congratulations! You passed!

Next Item

1 / 1 point

1.
How many connected components do you see in this graph?



- 0
- 1

Correct
True. A graph that is connected by itself has exactly one connected component, consisting of the whole graph.

- 5

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1 / 1 point

2.

What DOES “The Alternating algorithm is local” mean?

- There is a bar named “The alternating algorithm” not far away
- The Alternating algorithm is efficient only of you are running it on your local machine
- With every node in the graph performing some rewiring decisions is based solely on the structure of its neighbourhood.

Correct

yes, you are 100% right

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1 / 1 point

3.

What is the right definition of a stochastic graph?

- A graph where for each vertex the sum of weights of all the outgoing edges is equal to one

Correct

True. There is no way to trick you!

- A graph where the sum of all edges’ weights is equal to one
- The graph which exists with certain probability

---

1 / 1 point

4.

What conditions should THE GRAPH satisfy FOR ITS UNIQUE STATIONARY DISTRIBUTION TO EXIST?

Tick the true variants

- [x] Graph is Stochastic

Correct

True. This is the necessary(необходимое) condition

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- [x] There is a path from every node to every node

Correct
True. You are absolutely right

- [x] Graph by itself is one connected component

Un-selected is correct

- [x] The greatest common divider of all the cycle lengths is 1

Correct
True. This is the necessary(необходимое) condition

---

1 / 1 point

5.
The stationary distribution at a vertex is related:

Tick the true variants

- [x] A probability to get there after the first step

Un-selected is correct

- [x] To the probability of getting to a certain vertex after quite a big amount of steps.

Correct
True. You are learning really fast

- [x] To the amount of time a random walker spends visiting that vertex.

Correct
True. This is a correct answer.

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1 / 1 point

6.
In the Page Rank Formula

$$PR(p_i) = \frac{1-d}{N} + d \sum_{p_j \in \Gamma(p_i)} \frac{PR(p_j)}{L(p_j)}$$

what meaning does the fraction below have?

$$\frac{1-d}{N}$$

- There is a probability for every page to be chosen if a random surfer doesn't get bored
- There's a probability for every page to be chosen after a random surfer gets bored

Correct
Yep. You quickly grasp the essence

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1 / 1 point

7.
What type of edges does a taste graph have?

- Both types
- Directed edges

Correct
Correct, the taste graph is an oriented graph.

- Undirected edges

---

1 / 1 point

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8.

The taste graph is partly stochastic.

- If you take only the edges of the same type and only vertices of the same type you will receive a stochastic graph
- If you take only the vertices of the same type from a taste graph then you will receive a stochastic graph
- If you take only the edges of the same type from a taste graph then you will receive a stochastic graph

Correct

Correct statement

1 / 1 point

9.

Under the weight function ω_β graph G is a stochastic graph because

- For each vertex sum of weights of all the outgoing edges is equal to one

Correct

True. There is no way to trick you!

- It transforms weights of all the edges in a way that sum of all of them becomes equal to one
- It forces all the edges to have the same type