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NPTEL

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Courses » Joy of computing using Python

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Unit 14 - Week 12

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Course outline

How to access the portal

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Week 2: Introduction to Python

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Week 4: Cool Ideas (Part 2)

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Week 8: Cool Ideas(Part 6)

Week 9: Cool Ideas(Part 7)

Week 10: Cool Ideas(Part 8)

Week 11

Week 12

○ Page Rank - How does Google Work ? - Part 01

Assignment 12

The due date for submitting this assignment has passed. **Due on 2019-04-24, 23:59 IST.**

Assignment submitted on 2019-04-24, 19:06 IST

1) What is PageRank?   **1 point**

  ⦿ PageRank is an algorithm used to rank nodes in a network.

  ○ PageRank is an algorithm used to rank nodes only based on their in-degree.

  ○ PageRank is an algorithm used to rank nodes only based on their out-degree.

  ○ Both B and C

  Yes, the answer is correct.
  Score: 1

  Accepted Answers:
  PageRank is an algorithm used to rank nodes in a network.

2) State True or False: **1 point**
3n+1 problem is also called Collatz conjecture.

  ⦿ True

  ○ False

  Yes, the answer is correct.
  Score: 1

  Accepted Answers:
  True

3) State True or False.   **1 point**
The sequence based on 3n+1 problem will always reach 1.

  ⦿ True

  ○ False

  Yes, the answer is correct.
  Score: 1

  Accepted Answers:
  True

4) What is the sequence obtained according 3n+1 algorithm for n=9?   **1 point**

  ○ 28,14,7,22,11,34,17,26,13,40,20,10,5,16,8,4,2,1

  ○ 28,14,7,22,11,34,52,26,13,40,20,10,5,16,8,4,2,1

  ○ 28,14,7,22,11,17,52,26,13,40,20,10,5,16,8,4,2,1

  ⦿ 28,14,7,22,11,34,17,52,26,13,40,20,10,5,16,8,4,2,1

Yes, the answer is correct.
Score: 1

Accepted Answers:
28,14,7,22,11,34,17,52,26,13,40,20,10,5,16,8,4,2,1

5) Consider the following statements: *1 point*

a) Random Walk method requires lesser number of iterations to calculate accurate PageRank as compare to Points Distribution method.
b) Points Distribution method requires lesser number of iterations to calculate accurate PageRank as compare to Random Walk method

    ○ Statement a is correct
    ○ Statement b is correct
    ◉ None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
None of the above

6) In Random Walk method of page rank algorithm, at each iteration   *1 point*

    ◉ The nodes are traversed by choosing one of the out links of a given node randomly.
    ○ The nodes are traversed by choosing one of the in links of a given node.
    ○ The nodes are traversed in a random fashion
    ○ The nodes are traveresed by choosing the first out link of a given node.

Yes, the answer is correct.
Score: 1

Accepted Answers:
The nodes are traversed by choosing one of the out links of a given node randomly.

7) In the web graph, nodes are the web pages. What are the edges?   *1 point*

    ○ Network Connections
    ◉ Links to other web pages
    ○ URLs
    ○ None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
Links to other web pages

8) In the point distribution method of page rank algorithm, at each iteration, each node shares it pagerank value by -   *1 point*

    ○ Randomly choosing one of its outgoing link and sharing all its pagerank value to the node connected to that link.
    ◉ Dividing its pagerank value equally to all the outgoing links.
    ○ Generating a random pagerank value and then dividing it equally among the outgoing links equally.
    ○ None of the above.

Yes, the answer is correct.
Score: 1

Accepted Answers:
Dividing its pagerank value equally to all the outgoing links.

9) In random walk method, what is the next step when a sink node is encountered in the underlying graph?   *1 point*

    ◉ A random node is chosen out of all the given nodes.
    ○ The node with maximum number of incoming links is chosen.

○ The node with maximum number of outgoing links is chosen.

○ None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
A random node is chosen out of all the given nodes.

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