

# Assessment Questions on 'Practicing Graph Analytics in Neo4j With Cypher'

9 questions

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1.

[NOTE: The following questions apply to the results from the "Practicing Graph Analytics in Neo4j With Cypher" Assignment using the dataset titled 'gene\_gene\_associations\_50k.csv'. They are based on the assumption you successfully completed the "Practicing Graph Analytics in Neo4j With Cypher" assignment using the dataset included in the download linked below.]

gene\_gene\_associations\_50k.zip ([http...](#))

**What is the number of nodes returned?**

- ☐ 50,000
  - ☒ 9656
  - ☐ 9756
  - ☐ 8673
- 

2.

**What's the number of edges?**

- ☐ 50,000

- ☐ 49,834
  - ☒ 46,621
  - ☐ None of the above
- 

3.

The number of loops in the graph is:

- ☐ 1035
  - ☐ 1395
  - ☒ 1221
  - ☐ 1243
- 

4.

The query `match (n)-[r]->(m) where m <> n return distinct n, m, count(r)` gives us

- ☒ the count of all non loop edges between every adjacent node pair.
  - ☐ the count of all edges between every adjacent node pair.
  - ☐ the count of all edges.
  - ☐ None of the above
- 

5.

The query `match (n)-[r]->(m) where m <> n return distinct n, m, count(r) as myCount order by myCount desc limit 1` produces what?

- ☐ a random edge
- ☐ the node with the maximum number of looping edges

- ☐ two neighboring nodes, each with a high outdegree
  - ☒ the pair of nodes with the maximum number of multi-edges between them
- 

6.

The query match  $p=(n \{Name:'BRCA1'\})-[:AssociationType*..2]->(m)$  return  $p$  produces what?

- ☐ The neighbors' neighbors of the node whose name is 'BRCA1'
  - ☒ The 2-neighborhood of the node whose name is 'BRCA1'
  - ☐ The neighbors whose distance is greater than 1 and less than 2 of the node whose name is 'BRCA1'
  - ☐ The neighbors of the node whose name is 'BRCA1'
- 

7.

How many non-directed shortest paths are there between the node named 'BRCA1' and the node named 'NBR1'?

- ☐ 8
  - ☒ 9
  - ☐ 10
  - ☐ None of the above
- 

8.

The top 2 nodes with the highest outdegree are:

- ☐ GRB2 and TP53
- ☐ EP300 and BRCA1
- ☐ MEPCE and EGFR



SNCA and BRCA1

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9.

Applying the example queries provided to you, create the degree histogram for the network. How many nodes in the graph have a degree of 3?



1351



821



675



512

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