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Unit 16 - Week 12- Pseudocore (How to go viral on web?)

Week 12 - Assignment 1

1) Which of the following is responsible for drastically reducing the diameter of the small world networks? ***1 point***

- Homophily based edges
- Weak ties (long range contacts)
- All the edges
- None of the above

Accepted Answers:
Weak ties (long range contacts)

2) In Myopic search, a node does not have information about ***1 point***

- Its neighbbors connected to it with homophily based edges
- Its neighbbors connected to it with weak ties
- Weak ties of its neighbors
- None of the above

Accepted Answers:
Weak ties of its neighbors

3) In a core-periphery structure ***1 point***

- Low status people are linked in densely connected core while the high status people atomize around this core as periphery of the network.
- Core and the periphery occupy interchangeable positions in the network.
- The notion of a node being in a core or in a periphery does not depend on the social status or the wealth of a node.
- High status people are linked in densely connected core while the low status people atomize around this core as periphery of the network.

Accepted Answers:
High status people are linked in densely connected core while the low status people atomize around this core as periphery of the network.

4) Pseudo-cores are the nodes ***1 point***

- which belong to the core of the network (synonymous to core).
- which belong to the periphery of the network (synonymous to periphery).
- which do not belong to the innermost core of the network but have equal spreading power (cascade capacity) as the innermost core.
- which do not belong to the outermost periphery of the network but have equal spreading power (cascade capacity) as the outermost periphery.

Accepted Answers:
which do not belong to the innermost core of the network but have equal spreading power (cascade capacity) as the innermost core.

5) In a graph, node having the highest influential power tend to have highest ***1 point***

- degree
- betweenness
- closeness
- coreness

Accepted Answers:
coreness

6) Given a graph having a maixmum of 3-cores. While applying k-shell decomposition on this network, a node is removed in the iteration 2. This node belongs to ***1 point***

- 2-core of the network
- 2-core and 3-core of the network
- 1-core and 2-core of the network
- None of the above

Accepted Answers:
1-core and 2-core of the network

7) Given a graph having a maixmum of 3-cores. While applying k-shell decomposition on this network, a node is removed in the iteration 2. The core number of this node is ***1 point***

- 0
- 1
- 2
- 3

Accepted Answers:
2

8) In a complete graph on 4 nodes ***1 point***

- Every node has a core number 3.
- Every node has a core number 1.
- Every node has a core number 4.
- All nodes have different core numbers.

Accepted Answers:
Every node has a core number 3.

9) A node in a graph has degree 10. ***1 point***

- Its core number should be at least 10.
- Its core number can be at most 10.
- Its core number is 10.
- None of the above

Accepted Answers:
Its core number can be at most 10.

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