



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

Course outline

Course Trailer

FAQ

Things to Note

Accessing the Portal

Week 1 - Introduction

Week 2 - Handling Real-world Network Datasets

Week 3- Strength of Weak Ties

Week4 - - Strong and Weak Relationships (Continued) & Homophily

Week 5 - Homophily Continued and +Ve / -Ve Relationships

Week 6- Link Analysis

Week 7 - Cascading Behaviour in Networks

Week 8 : Link Analysis (Continued)

Week -9 : Power Laws and Rich-

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 neighbors connected to it with homophily based edges
- ☐ Its neighbors 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.

Get-Richer Phenomena**Week 10 - Power law (contd..) and Epidemics****Week 11- Small World Phenomenon****Week 12- Pseudocore (How to go viral on web?)**

- Lecture 150 : Programming illustration- Small world networks : Introduction
- Lecture 151 : Base code
- Lecture 152 : Making homophily based edges
- Lecture 153 : Adding weak ties
- Lecture 154 : Plotting change in diameter
- Lecture 155 : Programming illustration- Myopic Search : Introduction
- Lecture 156 : Myopic Search
- Lecture 157 : Myopic Search comparison to optimal search
- Lecture 158 : Time Taken by Myopic Search
- Lecture 159 : PseudoCores : Introduction
- Lecture 160 : How to be Viral
- Lecture 161 : Who are the right key nodes?
- Lecture 162 : finding the right key nodes (the core)
- Lecture 163 : Coding K-Shell Decomposition

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 maximum 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 maximum 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.

- Lecture 164 :
Coding
cascading
Model
- Lecture 165 :
Coding the
importance of
core nodes in
cascading
- Lecture 166 :
Pseudo core
- Quiz : Week 12
- Assignment 1
- Feedback for
Week 12
- Answers to
week 12
assignment

9) A node in a graph has degree 10.

- ☐ 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.

Previous Page

End