



About the Course

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Progress Mentor

## NPTEL » Social Networks

Course outline

course work?

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ties

in diameter

Introduction

Myopic Search

Introduction

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O Lecture 151 : Base code

homophily based edges

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O Lecture 154 : Plotting change

Lecture 155 : Programming illustration- Myopic Search :

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 Lecture 157 : Myopic Search comparision to optimal search

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O Lecture 160 : How to be Viral

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O Lecture 163 : Coding K-Shell

O Lecture 161: Who are the

right key nodes?

Decomposition

cascading

 Lecture 164 : Coding cascading Model

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O Quiz : Assignment 12

Week 12 Feedback

**Assignment Solutions** 

No, the answer is incorrect.

Every node has a coreness of 4

Accepted Answers:

Periphery

Special-Core

Pseudo-core

Accepted Answers:

No, the answer is incorrect.

Structural holes are present

No, the answer is incorrect.

Structural holes are present

Accepted Answers:

10) Pick the incorrect statement for a complete graph:

Edge betweenness of each edge is zero

Neighborhood overlap is maximum for each pair of nodes

All nodes score same centrality score for any centrality measure

Hyper-core

Score: 0

Score: 0

Pseudo-core

Score: 0

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importance of core nodes in

key nodes (the core)

O Lecture 152: Making

How does an NPTEL online

## Unit 14 - Week 12

The due date for submitting this assignment has passed.	Due on 2020-04-22, 23:5
As per our records you have not submitted this assignment.	Duo 011 2020 01 22, 2010
1) Which of the following statements defines the k -shell of a graph?	
the subgraph induced by edges in the $k$ -core and not in the $(k + 1)$ -core.	
the subgraph induced by edges in the (k +1)-core and not in the k -core	
the subgraph induced by edges in the k -core and not in the (k -1)-core. the subgraph induced by edges in the (k -1)-core and not in the k -core	
No, the answer is incorrect.	
Score: 0 Accepted Answers:	
the subgraph induced by edges in the $k$ -core and not in the $(k + 1)$ -core.	
2) An Internet meme is	
A piece of text traversing through the Internet.      An image traversing through the Internet.	
A video traversing through the Internet.	
Any kind of digital artefact traversing through the Internet, be it an image, audio, video or a file in some ot	her format.
No, the answer is incorrect. Score: 0	
Accepted Answers:	
Any kind of digital artefact traversing through the Internet, be it an image, audio, video or a file in some other format.	
Whether a meme will go viral or not depends on	
The quality of the meme and structure of the network	
Only on the quality of the meme Only on the structure of the network	
Neither on the quality of the meme nor on the structure of the network.	
No, the answer is incorrect.	
Score: 0 Accepted Answers:	
The quality of the meme and structure of the network	
4) The nodes which should be initially infected in a network in order to make an Internet meme go viral should	d have
High degree	
High betweenness	
High closeness	
O High coreness	
No, the answer is incorrect. Score: 0	
Accepted Answers: High coreness	
5) The i <sup>th</sup> iteration of k-shell decomposition algorithm	
Removes all the nodes of degree i from the graph.	
Recursively keeps removing the nodes of degree i from the graph, i.e., keeps removing the degree i nodes the graph.	s from the graph till there are no degree i
Recursively keeps removing the nodes of degree ≤ i from the graph, i.e., keeps removing the node of deg	ree ≤ i from the graph till there are no deç
nodes in the graph.	was a life on the group till there are no decide
Recursively keeps removing the nodes of degree ≥ i from the graph, i.e., keeps removing the node of degree in the graph.	ree ≥ i from the graph till there are no dec
No, the answer is incorrect.	
Score: 0 Accepted Answers:	
Recursively keeps removing the nodes of degree ≤ i from the graph, i.e., keeps removing the node of	
degree ≤ i from the graph till there are no degree ≤ i nodes in the graph.	
6) The nodes of degree 1 in a graph	
○ Will always belong to 1-core.	
Will always belong to 2-core.	
Can belong to any core.  Will always belong to the innermost core of the network.	
No, the answer is incorrect.	
Score: 0	
Accepted Answers: Will always belong to 1-core.	
Choose the correct statement from the following	
	shall decomposition algorithm
<ul> <li>Both the core and periphery of a network are the nodes which are removed during the first iteration of k-s</li> <li>Core of a network are the nodes removed in the first iteration of the k-shell decomposition algorithm while</li> </ul>	
the last iteration of the k-shell decomposition algorithm.	
Both the core and periphery of a network are the nodes which are removed during the last iteration of k-s	
Core of a network are the nodes removed in the last iteration of the k-shell decomposition algorithm while the first iteration of the k-shell decomposition algorithm.	e periphery of a network are the nodes re
No, the answer is incorrect.	
Score: 0 Accepted Answers:	
Core of a network are the nodes removed in the last iteration of the k-shell decomposition algorithm while	
periphery of a network are the nodes removed in the first iteration of the k-shell decomposition algorithm.	
8) In a clique of size 5	
Every node has a coreness of 4	
Every node has a coreness of 5	
Every node has a coreness of 6	
Every node has a coreness of 7	

9) A node that does not belong to the innermost core of the network but has equal spreading power (cascade capacity) as the innermost core is called 1 point

1 point