

(Approved an Email by
Director - IET)

Syaba

JK LAKSHMIPAT UNIVERSITY

PHD 1ST SEMESTER, TERM III - EXAM, JANUARY 2022

SUBJECT: LARGE SCALE GRAPH ANALYTICS

MARKS: 20

CODE: CS2210

TIME: 1 HOUR 30 MINUTES

[MARKS DISTRIBUTION: 6 + 6 + 8 = 20]

1. What is Eigenvector centrality of a large graph, include its equation in your answer? How Eigenvector centrality is different with closeness centrality and between-ness centrality?
2. Describe in detail the HITS (hypertext induced topic search) algorithm, incorporate equations and diagrams in your answer, derive its matrix equation.
- 3.

	A	B	C	D	E
A	0	1	1	1	0
B	0	0	1	1	1
C	1	1	0	1	0
D	1	0	1	0	1
E	1	0	1	1	0

Compute the PageRank of the nodes A, B, C, D and E for the graph above given as adjacency matrix (at least 3 iterations).