

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

B.E. / B.TECH. (FULL TIME) END SEMESTER EXAMINATIONS APRIL/MAY 2019

INFORMATION TECHNOLOGY

VI Semester

IT8015 – SOCIAL NETWORK ANALYSIS

(Regulation 2012)

Time: 3 Hours

Answer ALL Questions

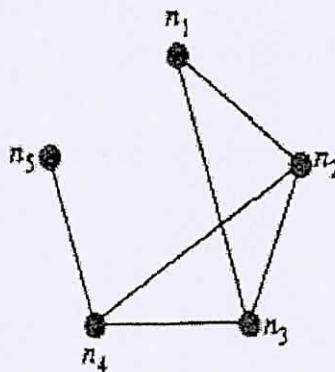
Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What are the limitations of current Web?
2. How list structure can be used for representing social network data? Give an example.
3. List the RDF model elements and provide one example each.
4. Define ontology.
5. What is DOSN? Give its benefits.
6. Mention any four applications of community detection and mining.
7. What is Quality of Experience (QoE)? Mention its uses.
8. Draw the context layering model.
9. How human-centric social relationships can be visualized? Give some examples?
10. What are covert networks? Give any two examples for such type of networks.

Part – B (5 x 16 = 80 marks)

11. For the following network graph:



- (a) Calculate the minimum communication link between each pair. (4)
- (b) Identify the most prominent node. (4)
- (c) Calculate the measure of involvement of the most prominent node in the communication between other nodes. (4)
- (d) Identify the density of the network. (4)

12. a) Discuss about FOAF ontology describing its main classes, properties, tag categories, characteristics of social relationships and applications with examples. (16)

(OR)

- b) Brief with suitable RDF schema(s) and example(s) the following:
 - (i) Ontological representation of social individuals (8)
 - (ii) Ontological representation of social relationships (8)

13. a) Explain the general architecture of Distributed Online Social Network (DOSN). (16)

(OR)

- b) Discuss about the divisive and agglomerative techniques with suitable algorithms for community detection from social networks. (16)

14. a) Discuss about user data management and issues related with user profile management with suitable examples. (16)

(OR)

- b) Write short notes on the following:
 - (i) Trust model based on subjective logic. (8)
 - (ii) Operators for deriving trust. (8)

15. a) Discuss about the advantages and drawbacks for visualizing social networks using Matrices or node-link diagrams. (16)

(OR)

- b) Explain about any four challenges in co-authorship networks and suggest suitable solutions. (16)

