

Code No: **RT42054D****R13****Set No. 1****IV B.Tech II Semester Regular/Supplementary Examinations, April - 2018****SOCIAL NETWORKS AND THE SEMANTIC WEB****(Computer Science and Engineering)****Time: 3 hours****Max. Marks: 70***Question paper consists of Part-A and Part-B**Answer ALL sub questions from Part-A**Answer any THREE questions from Part-B************PART-A (22 Marks)**

1. a) How the Semantic Web so useful for the development of web? [4]
- b) Define affiliation networks & its major role in network analysis. [4]
- c) What is meant by relational databases? [3]
- d) List the Classes and properties of the FOAF ontology. [4]
- e) Explain the role of Permanent Node Ranker in RDF. [4]
- f) How the Evaluation is performed through analysis? [3]

PART-B (3x16 = 48 Marks)

2. a) Explain how the Semantic Web is to apply advanced knowledge technologies in order to fill the knowledge gap between human and machine. [8]
- b) What is Semantic Web? Explain with an example. [8]
3. a) Discuss in detail about the global structure of networks. [8]
- b) Explain clearly the concept of Personal networks. [8]
4. a) Explain clearly about the Resource Description Framework (RDF) and RDF Schema. [8]
- b) Compare and contrast OWL with UML. [8]
5. a) Discuss the Ontological representation of social relationships. [8]
- b) Explain the OWL-S service profiles? Explain how OWL-S ontology is created for web services. [8]
6. a) Explain how GraphUtil is facilitates reading FOAF data into the graph object model. [8]
- b) Explain the architecture of Flink. [8]
7. a) Discuss the following:
 - i. The effect of network structure on performance
 - ii. The effect of cognitive network structure on performance[8]
- b) Discuss the following:
 - i. Similarity measures for graphs based on edge sets
 - ii. Flink system used Data acquisition[8]