

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*

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**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]