Code No: 815BK **R13**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA V Semester Examinations, June/July - 2018
SEMANTIC WEB AND SOCIAL NETWORKS

Time: 3 Hours **Max. Marks: 60**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 8 marks and may have a, b, c as sub questions.

PART - A

5 × 4 Marks = 20

1.a) What is meant by the concepts of 'thinking' and 'intelligent applications' on the web? [4]
b) List the merits and limitations of RDF and RDFS. [4]
c) Write various conditional transformation rules in propositional logic. [4]
d) What are the three types of processes defined by the OWL-S? Give examples for each type. [4]
e) Give the different measures of co-occurrence and give their disadvantages. [4]

PART - B

5 × 8 Marks = 40

2. Discuss the forces behind the information revolution and compare them with industrial revolution. [8]

OR

3.a) How is the goal of semantic web different from most systems of logic?
b) Briefly review Berners-Lee's contribution in developing the Web. [4+4]

4. "The document type definition is used for validating the XML document". Substantiate this statement with relevant examples. [8]

OR

5. Describe the requirements for web ontology language and its relationship with Resource Description Framework Schema. [8]

6. Explain tree search approaches for inference engine working. [8]

OR

7.a) Describe the application areas for semantic technology.
b) What is a knowledge base? Compare it with database. [4+4]

8. Describe in detail the five steps required in creating an OWL-S ontology for web services. [8]

OR

9. What is social network analysis? Explain the development of social network analysis as convergence of several streams of applied research. [8]

10.a) Discuss digital diaries as a source of network analysis.
b) What is meant by online community space? Give examples. [4+4]

OR

11. Describe the architecture of Flink and discuss its features. [8]

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