Indian Statistical Institute
Documentation Research and Training Center

MS in Library and Information Science
Mid-Semester Exam (IV semester) (2016-2018)

Paper –20 : SEMANTIC WEB

Date: 28.02.2018

Max Marks: 40
Time: 90 minutes

Answer any four questions. All questions carry equal marks.

1. What is Semantic Web (SW)? Discuss the reasons for the proposition of extending the current HTML based WWW to a semantic web. [2+8]

2. Briefly, describe the following semantic web technologies RDF/RDFS and Rule. [10]

3. Briefly, describe "ontology" in your own words. Produce an RDF Graph based on the following code provided in RDF/XML. [2+8]

```xml
<?xml version="1.0" encoding="utf-8"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
        xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
        xmlns:dcterms="http://purl.org/dc/terms/"
        xmlns:xsd="http://www.w3.org/2001/XMLSchema#"
        xmlns:voc="http://www.example.org/voc/"
        xml:base="http://example.org/exercise/">
<rdf:Description rdf:about:"http://www.isko.org/journal/jkopub/2014/fromkotokr">
   <dcterms:creator rdf:resource="http://www.example.org/person#fgiunchiglia"/>
   <voc:publishedIn rdf:resource="http://www.isko.org/journal/jko"/>
   <dcterms:date  rdf:dataType="&xsd:date">"2014-01-01"</dcterms:date>
</rdf:Description>
</rdf:RDF>
```

4. What are the primary differences between a thesaurus and an ontology? Briefly discuss the essential features of a knowledge representation language.

[4+6]

5. Answer *any two* of the following. [5*2]
   a. Write a short note on a blank node.
   b. Briefly, describe rdf:type.
   c. Write a short note on unified modeling language.