Name : ....

Roll No. : ....

Invigilator's Signature : ....

CS/M.Tech(CSE)/SEM-1/PGCS-105A/2009-10
2009
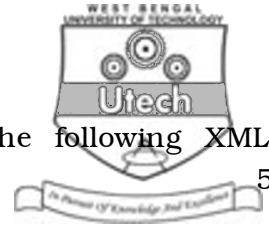# WEB TECHNOLOGY

Time Allotted : 3 Hours   Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer any *five* questions.

1. a) What is RMI ?   2

   b) Describe RMI architecture.   8

   c) What are Stub, Skeleton and RMI registry ?   4

2. a) What is web 2·0 ?   2

   b) How does the semantic web relate to web 2·0 ?   4

   c) How does the semantic web relate to artificial intelligence ?   4

   d) List the problems associated with the use of keyword based search engines.   4

3. a) What are ontologies in the semantic web content ?   3

b) Show the tree representation of the following XML document : 5

```
<M? xml version = "1·0" encoding = "UTF-16" ?>

<! DOCTYPE email SYSTEM "data.dtd">

<inventory>

    <drink>

        <lemonade>

            <price> $ 2:50</price>

            <amount> 20</amount>

        </lemonade>

        <pop>

            <price> $ 1·50 </price>

            <amount> 10</amount>

        </pop>

    </drink>

    <snack>

        <chips>

            <price> $ 4·50 </price>

            <amount> 60</amount>

        </chips>

    </snack>

</inventory>
```

c) What are XML namespace ? 3

d) Why do we need them ? 3

4. a) What is DTD ? What are the different types of DTD ? 3

b) Discuss in brief the XML schema. 5

c) Write down a DTD for the following element : 6

```
<order orderNO = "23456" customer = "John

    smith" date = "Oct 15">

    <item itemNO = "a528" quantity = "1"/>

    <item itemNO = "c817" quantity = "2"/>

</order>
```

5. a) What is XSLT ? 3

b) Give the usage of Xlink and Xpath. 5

c) With example show how to use XSLT. 6

6. a) What is RDF ? 2

b) Explain when you should RDF and when you should use XML. 5

c) Describe RDF with an example. 7

7. a) How do web services provide more flexibility than previous RPC protocols ? 6

b) What is SOAP ? 2

c) What are the advantages and disadvantages of SOAP ? 6

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