**Note: Answer any two full Questions**

| Q.No | Questions | Marks |
|---|---|---|
| 1 a | Story of Web levels 1, 2, 3 seems to categorize the user from the material and technical contingencies, to bring transparency in the exchanges and to open on new functionalities. | 4 |
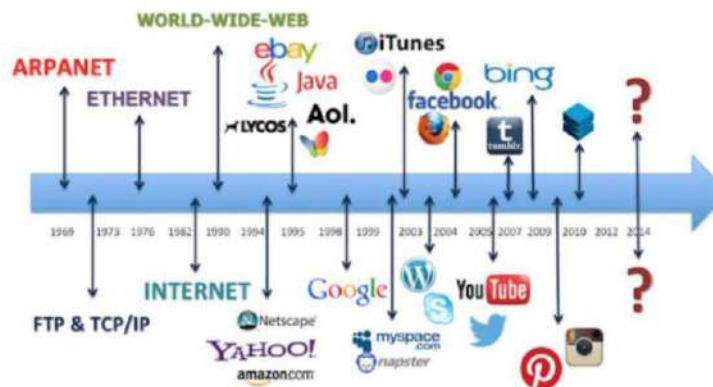


Explain different characteristics of each of these web levels in detail.

| b | Consider below relational database for the movies. | 6 |

| Name | Director | Release Date | Actor |
|---|---|---|---|
| Pulp Fiction | Quentin Tarantino | 1994 | John Travolta |
| Taste of Cherry | Abbas Kiarostami | 1997 | Homayoun Ershadi |
| Saturday Night Fever | John Badham | 1977 | John Travolta |

| Festival Name | Year | Name | Country |
|---|---|---|---|
| Cannes Film Festival | 1994 | Pulp Fiction | USA |
| Cannes Film Festival | 1997 | Taste of Cherry | Iran |

i.   Design an equivalent graph model for the database shown in above table.
ii.  Build a Triplestore consisting at least three triples and identify appropriate subject, predicate and object.

| c | The statement "John born in London on 23rd of May 1985" can be easily interpreted by humans. Whereas to process this information by an application running on computer we require structured | 10 |

data. Using traditional web with structured data, it is difficult to answer the questions like Who is John? Which London do you mean, the big one in the UK or the smaller one in Canada? Does 06-05 mean May 6th or June 5th?

Explain which concept of web technology that can be used to answer for the above questions.

| | | |
|---|---|---|
| 2 a | Better yet, a Bill of Responsibilities. | 4 |

Tim Berners-Lee has come up with 9 online bill of rights and two states that
Bill 3: Respect and protect people's fundamental online privacy and data rights
Bill 4: Respect and protect people's privacy and personal data to build online trust
Elaborate on the understanding of these bills with respect to the semantic web.

b    Consider the below statement     6
"Toby Segaran is the author of semantic web"
Model the above statement using XML. Identify the its limitations. Explain why RDF graph model is preferred over XML.

c    Consider the following given RDF graph. Apply and explain with respect to:     10
    i.     Merging of graphs

c    Consider the following given RDF graph. Apply and explain with respect to:     10
    i.     Merging of graphs
    ii.     Feed forward inference
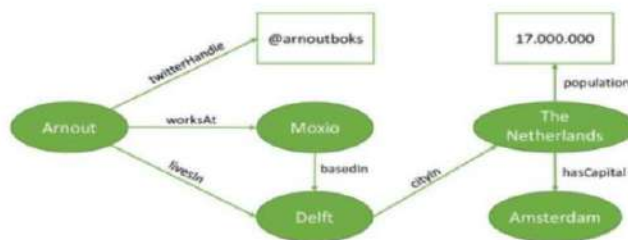


3a    Design a suitable architecture that contributes to extend the Web of data from web of documents by adding a multitude of language standards and software components to give humans and machines direct access to data.     10

b    Graph model suffers from following problems while integrating distributed data     4
    • The same resource may be labelled with two different identifiers.