Problem	1	2	3	4	Total
Points:	12	20	6	22	60
Score:					

This homework assignment has 4 problems, for a total of 60 points.

1. (12 points) Of the following statements, identify all that hold about e-business concepts.

    A. Electronic business forces interactions across administrative domains

    B. Electronic business requires closed information systems to ensure security

    C. Optimistic handling is a possible approach for handling global constraints

    D. Some examples of essential global information in a distributed system are important overall constraints

    E. Integration yields a single homogeneous entity for the integrated subsystems

    F. Accommodating dynamism is desirable because of the difficulty of maintaining configurations by hand

2. (20 points) Of the following statements, identify all that hold about architecture.

    A. In the best information architectures, the best interconnections are COTS (commercial off-the shelf) products

    B. Protocols help improve productivity by enhancing reuse

    C. In practical settings, IT architectures are studied along with the human organizations by which system components are maintained

    D. An enterprise model should describe the resources of the enterprise (i.e., its databases and such), but should not describe its business processes

    E. Two-tier architectures separate presentation from business logic

    F. An advantage of placing business logic in a separate tier is that it can be more easily inspected and modified

    G. According to Vernadat, metadata registries have been superseded by relational databases in modern IT architectures

    H. According to Zachman, process descriptions include both functional flows and data flows

    I. According to Clark and Waclawsky, what usually drives the need for changing designs is the emergence of new products

    J. According to Eric Yu, for Internet-based information systems, modeling techniques must accommodate considerations of what, where, when, how, *and* why

3. (6 points) Of the following statements, identify all that hold about names, identifiers, and namespaces. (Below N.n is a qualified name corresponding to a local name n defined in a namespace N.)

    A. The main prerequisite for a unique location scheme is the existence of an architecture by which locations can be resolved

    B. If $N_1.n_1$ and $N_2.n_2$ are the same name, then N_1 and N_2 are the same namespace

    C. If N_1 and N_2 are the same namespace, then $N_1.n_1$ and $N_2.n_1$ are the same name

4. (22 points) Of the following statements, identify all that hold about metadata, XML, and XML Schema.

    A. A stock quote is an example of metadata

    B. Markup is one of the ways in which metadata may be supplied

    C. Provenance metadata stores the origins rather than the proofs for the associated data

D. Metadata is desirable for technical reasons, but regulatory reasons often preclude using metadata

E. XML is the first standardized markup language

F. XML namespaces are the first kind of namespaces used in computer science

G. In an XML document, an element can sometimes be placed within an attribute

H. Although XML documents are structured as trees, XML Schema grammars are structured as graphs

I. In XML Schema, we can easily specify that a specific element occur no fewer than thirteen times

J. The XML Schema choice element is a compositor that functions as exclusive OR of its children

K. Empty elements are *not* the same as nil elements