THE UNIVERSITY
of LIVERPOOL

SEPTEMBER 2002 EXAMINATIONS

Bachelor of Arts : Year 1
Bachelor of Science : Year 1
Bachelor of Science : Year 2

SOFTWARE DEVELOPMENT IN CONTEXT

TIME ALLOWED : 1.25 Hours

INSTRUCTIONS TO CANDIDATES

This paper is in 3 sections

Attempt *ALL* questions from *ALL* sections

The questions in this paper add up to 70 marks and are worth 70% of the final course mark.

If you attempt to answer more than the required number of questions (in any section), the marks awarded for the excess questions will be discarded (starting with your lowest mark).

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SECTION 1
Each question in this section is worth <u>TWO</u> marks

1. Distinguish clearly between the Internet and WWW.

2. What is the basic unit for information exchange on the WWW?

3. What does the acronym "URL" stand for?

4. What is the Semantic Web?

5. What is ANSI?

6. What single term can be used to describe "documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes and services are fit for their purpose" ?

7. What is meant by "intellectual property rights"?

8. Suggest one possible disadvantage to computer programmers of the spread of software patents.

9. What does TCP/IP stand for?

10. How long does most copyright last?

SECTION 2
The questions in this section are worth <u>THREE</u> marks each.

11. What are "prior disclosures" and why is it important to know about them in terms of patenting an invention?

12. List any **three** of the criteria that must be satisfied if an invention is to be patentable.

13. What is a right of paternity?

14. Which UK Act of Parliament criminalises unauthorised modification of computer material?

15. What are XML and RDF and why are they important technologies for the Semantic Web?

16. In the context of RDF and the semantic web, what are Metadata?

17. Name three types of personal sensitive data in the 1998 Data Protection Act.

18. What is meant by an *affordance*, and how is this notion relevant to user-interface design?

19. Briefly describe an example of the use of metaphor in designing a user-interface. Say why you think your example is particularly effective or ineffective as a metaphor.

20. What is meant by the Java keyword `synchronized`, and what is this keyword's intended use?

SECTION 3

The Questions in this section are each worth <u>FIVE</u> marks
[NOTE: credit will be given for clearly explained and relevant examples]

21. "MEMEX is a precursor for the World Wide Web". Discuss this statement with reference to Bush, Berners-Lee and Hypertext.

22. Discuss the statement that the major rule for the design of Human-Machine interfaces is "KISS -- Keep it Simple, Stupid".

23. Discuss the value of the ISO 9000 series of standards to a Software Developer.

24. Discuss the advantages of a Software Audit to a large organisation's computer information systems.