

OLLSCOIL NA hÉIREANN, GAILLIMH**National University of Ireland, Galway****Autumn Examinations, 2001/2002****Bachelor of Commerce - Final Year****INTERNET AND MULTIMEDIA DEVELOPMENT (MS312)****Professor B. O'Keefe****Professor J. F. Collins****Mr. M. A. Lang**Time allowed: **TWO** hoursCandidates are required to answer **THREE** questionsAll questions carry **EQUAL** marks.

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1. The development of hypermedia information systems raises significant challenges for systems developers, in so far as hypermedia systems are fundamentally different from "traditional" systems and present new difficulties.

Critically discuss this statement. In your answer, you should present both sides of the argument.

33 marks*(Suggested time: 35 minutes)*

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2. Web and multimedia systems design involves the collaborative work of many individuals with diverse specialised skills. Discuss the implications of this, in terms of how the development process is managed and co-ordinated.

33 marks*(Suggested time: 35 minutes)*

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3. A startup multimedia development company with a team of five developers is considering the purchase of a number of high-end multimedia workstations, as well as a server machine which shall host a shared repository of multimedia objects. Advise them.

33 marks*(Suggested time: 35 minutes)*

4. In recent years, the World Wide Web has outgrown CD-ROMs as a mechanism for the delivery of interactive multimedia and hypermedia applications. However, despite its many advantages, there are a number of technical inhibitors and unresolved design concerns that as yet severely constrain Web-based multimedia systems.

What are these inhibitors and how may they be resolved?

33 marks

(Suggested time: 35 minutes)

5. (a) The Hypertext Markup Language (HTML) is computer-legible but not computer-intelligible, in so far as computers can read and render HTML, but cannot understand the relevance of its content.

The lack of metadata is a major shortcoming of HTML. Describe the implications of this shortcoming, and how it may be resolved.

15 marks

(Suggested time: 15 minutes)

- (b) Describe, with examples, **any two** of the following Web form input types in the Hypertext Markup Language (HTML):

- RADIO buttons ☐ **9 marks**
- HIDDEN parameters **9 marks**
- CHECKBOX boxes ☒ **9 marks**

(Suggested time: 20 minutes i.e. 10 minutes each)

6. Briefly describe **any two** of the following:

- (a) Graphic image file formats for the World Wide Web. **16.5 marks**
- (b) Streaming media formats for the World Wide Web. **16.5 marks**
- (c) Synchronised Multimedia Integration Language (SMIL). **16.5 marks**

(Suggested time: 36 minutes i.e. 18 minutes each)

7. Human beings in their natural everyday behaviour use multimedia signals to communicate information to one another. Multimedia computing therefore promises to greatly enhance the way humans interact with computers, moving away from crude devices such as keyboards and mice towards more natural means of input and output.

Discuss the prospects for multimedia human-computer interaction.

33 marks

(Suggested time: 35 minutes)