

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF APPLIED SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
JULY 2001 SUPPLEMENTARY EXAMINATION

SUBJECT: VISUAL PROGRAMMING AND DEVELOPMENT CONCEPTS
CODE: SCS1206

INSTRUCTIONS

Answer ALL questions in Section A and any FOUR in Section B
All questions carry equal marks [20 each]

Time: 3 hours

SECTION A

- 1a) What do you understand by the term event driven programming? [3]
- b) What are the main differences between traditional (textual) programming and visual programming? In your comparison include advantages of one over the other. [4]
- c) Define the following terms, giving examples, as applied to visual programming:
- i. Event
 - ii. Object
 - iii. Property
 - iv. Method
 - v. Application [10]
- d) What are the three main steps to designing an application in a Visual-programming environment? [3]

QUESTION FOUR

- a) What is meant by hacking into a computer installation? [5]
- b) Describe two ways in which a hacker could attempt to gain access to a computer system. [10]
- c) For each method you described in (b), give a possible defensive measure. [5]

QUESTION FIVE

List four crimes which could be committed using a computer. For each crime, explain how it could be carried out and methods of safeguarding against such a crime. [20]

QUESTION SIX

- a) Define the terms:
 - i) virus
 - ii) worm
 - iii) time bomb [5]
- b) What measures would you consider to safeguard your system against infection? [5]
- c) Imagine that a government minister has called for all software engineers to be licensed. Practitioners would have to pass a test set by the Ministry every five years. Your Professional Society has asked you to comment on the proposal. What arguments would you put forward in favour and against? [10]

QUESTION SEVEN

- a) A commercially sold software package is licensed for a single user only. It contains hidden code that defects if it is illegally installed on more than one computer in a network, and if so deletes files from the host computer at random.

Comment on whether this procedure is ethical.

[10]

- b) What characterizes a profession?

[5]

- c) Describe any two information technology related health problems. [5]

END OF QUESTION PAPER

GOOD LUCK!