

OLLSCOIL NA hÉIREANN
THE NATIONAL UNIVERSITY OF IRELAND, GALWAY

SEMESTER 2 EXAMINATIONS 2000

SECOND YEAR INDUSTRIAL ENGINEERING AND INFORMATION SYSTEMS
CT 226 - PC APPLICATIONS SOFTWARE

SECOND YEAR SCIENCE
THIRD YEAR SCIENCE
CT 202 - PC APPLICATIONS SOFTWARE

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Time allowed: Three hours
Answer any four questions
All questions carry equal marks

- Q1. (a) With respect to the Excel spreadsheet package, explain the terms *absolute addressing*, *relative addressing* and *circular references*. Illustrate your answers with examples.
- (b) Outline briefly, how Excel may be used to solve a set of simultaneous equations
- (c) Databases may be set up on a spreadsheet such as Excel and manipulated using Pivot Tables *or* can be set up in a fully-fledged database program such as Access. What factors should you consider when choosing between these two options?
- Q2. (a) What is an operating system? What types of service does an operating system provide?
- (b) What are the advantages and disadvantages of the Windows NT operating system compared to Windows 95/98?
- (c) Describe the Instruction Execution cycle. Illustrate your answer with an example.
- Q3 Write short notes (with examples where appropriate) on any three of the following topics:
- (i) FTP (File Transfer Protocol)
 - (ii) Domain Name Servers
 - (iii) Secondary storage devices
 - (iv) ROM versus RAM
 - (v) LANs and WANs

- Q.4. (a) With respect to relational databases explain the terms: *primary key*, *foreign key* and *referential integrity*.
- (b) In what situation would it be necessary to use a *junction table*? Why might you need to set up two tables in a one-to-one relationship?
- (c) What is TCP/IP? Explain the use of *packets* in the context of TCP/IP.
- Q.5. (a) Explain the difference between the terms: Internet, Intranet and Extranet.
- (b) What are the common types of computer viruses? Give examples of some viruses and the effects they have.
- (c) In the context of computer networks explain the difference between clients and servers. Illustrate your answer with examples.