

THE INSTITUTE OF COMMERCIAL MANAGEMENT

SUBJECT SYLLABUS



**Computer appreciation
&
Applications**

Overview

This paper is incorporated into many programmes to provide a common computer appreciation element now expected with business courses.

Centres should be attempting to instruct students in the latest developments. As computing develops and new features become common, so minor inclusions will be added (e.g. range of computer CD devices). Deep technical details are not expected although it must be pointed out that student performance in past papers suggests that superficial coverage in particular areas often results in student misconceptions.

Candidates should have an appreciation of how hardware/software is used and works without detailed technical knowledge. (E.g. Optical character reading - reflected laser light converted to binary signals - OCR recognition software needed to convert the bit-map image into words by comparison with stored patterns.)

Practical experience of the use of common general-purpose packages (word processing, database, spreadsheet etc.) is essential. A significant part of the paper will test these.

Aims

1. Appreciation of uses made in general of computers across business and associated industries.
2. General appreciation of operating a PC.
3. Simple practical experience in using standard packages such as word processing, databases and spreadsheets.

Syllabus

Hardware and data:

Clear distinction between data and program, data and options/parameters, programmer and user
General configuration of a computer and components of the CPU (ALU, memory, control)
Directions of data flow
Types of memory (ROM, RAM, cache, video)
Features of a modern PC
Input devices - general survey with emphasis on use rather than how the device works - OCR, OMR, MICR devices, bar code reader, types of keyboards, optical scanner, digitiser, voice input device, ATM, touch screen, mouse
Distinction between uses of keyboard and mouse
Output devices - range of current printer types (laser, dot matrix, ink jet etc.) - relative speeds/costs/quality
VDU, plotters, microfilm
For a given application, select the most appropriate input/output devices or method of data capture
Data validation - definition and purpose
Identify validation possible with particular data
Check digits
Data types - integer, decimal, text/character, logical, date, currency etc.
The need to define data by type

Business Applications:

Accounts
 The component parts of an accounts package
 Typical input and output documents
 Stock control
 Its purpose
 Typical input and output data
 Contents of the stock file
 Sales
 Concept of customer, sales orders, purchase orders and supplier files (and stock file)
 Contents of these files
 Concept of cross-referencing (customer number linking sales order with customer file)
 General appreciation of who would supply input data and use output data and why (e.g. stores clerk would use a re-order list to place orders with suppliers for restocking)

Files and File Access:

Magnetic and optical storage devices and media
 Their limitations
 Definitions of file, record and field
 Examples taken from particular situations
 File organisation defined as organisation of records on a file
 Consideration of serial, sequential and indexed sequential organisation
 The stages of accessing a particular record from serial, sequential or indexed sequential files
 Contents of a particular file - fields, data types, sizes, purpose of being on the file
 Concept of master and transaction file
 System diagram for a general update of a master file using a transaction file
 Security of data files
 Backups, environmental conditions, restricted access, administrative controls
 Distinction between different types of files - program, data, text, parameter files

Software:

The role of the operating system in controlling the computer
 Basic features of an operating system (command or GUI)
 Distinction between general purpose software (e.g. database) and special purpose software (e.g. payroll)
 Examples of special purpose packages
 Word Processing
 Options available
 How to use them (in general terms)
 Margins, fonts, special effects (underline/centre/bold etc.), spell check, grammar check
 Standard phrases
 Inclusion of graphics
 Databases
 How to create a new file, add records, edit records, delete records, selective search by particular criteria, rearrange data, produce reports
 Spreadsheets
 Formatting a model (decimal places, alignment, extra rows/columns etc.)
 Adding simple formulae

- Simple functions such as sum/average
- Replicating a formula
- Absolute and relative addresses
- Graphics
- Features available in graphics/drawing/CAD package
- Standard shapes
- Moving, enlarging, rotating, stretching, colouring, hatching, dimensioning, layering

Systems and Programming:

- Brief review of system life cycle
- Methods of fact finding
- An overview of the role of the analyst - to investigate, design and supervise installation of a new system
- An overview of the role of the programmer - to convert a systems specification into a program by devising a logical structure, coding into a language, testing and documenting
- Distinction between development programmer and maintenance programmer
- Distinction between high and low level languages
- Brief survey of common high level languages and typical uses

People, Computers and Society:

- Brief overview of tasks performed by computing personnel - data processing manager, systems analyst, programmer, ancillary staff/data input clerks
- Social effects of computers - changes in lifestyle, changes at work, need for training, crime and crime prevention, data protection acts treated in outline

Communications:

- Spread of networks - reasons and advantages
- Data transmission
- Differences between LAN and WAN
- Electronic mail using a provider's central system
- Outline of internet features

Reading List

Main Text:

- Computer Science – C S French, 5th Edition (Continuum)

