Higher Education Qualifications – Student Study Guide

Diploma in IT Syllabus
Core Module: Professional Issues in Information Systems Practice

Rationale:
In order to function effectively, professional Information Systems Engineers need not only appropriate technical knowledge, skills and experience, but also a broad understanding of the context in which they will be expected to work. This does not mean that they must become experts in these areas (although those who go on to assume substantial management responsibilities may later need to acquire professional knowledge and expertise in some of them).

Aim:
To understand the context – ethical, social, legal, financial and organisational – in which professional Information Systems Engineers work.

Objectives:
- Demonstrate an understanding of the role of professional codes of conduct and apply them to specific situations
- Understand the nature and legal standing of a range of organisations
- Describe and discuss the range of functions that exist in an organisation, the need for organisational structure and the characteristics of various types of structure
- Interpret, at a basic level, a balance sheet, a profit and loss account, and a cash flow statement
- Calculate and interpret, in simple cases, the basic information needed for day-to-day financial management
- Identify the main pieces of legislation that apply to the profession and recognise situations to which they are relevant
- Explain the mechanisms used to protect computer software and the reasons for such protection

Prior Knowledge Expected:
Candidates are expected to be familiar with the material covered in the Certificate syllabuses and to have an appreciation of current affairs such as may be obtained by regular reading of a serious newspaper (e.g. The Times or its equivalent in other countries) or news magazine (e.g. The Economist).
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Content:

PROFESSIONAL INSTITUTIONS

The role of professional institutions and their characteristics: established by Royal Charter, self-governing, controlling entry to the profession and maintaining discipline; reservation of title and reservation of function. Some familiarity with the best-known professional institutions (e.g. those governing engineering, the law, medicine and accounting) will be expected.

The British Computer Society, its charter and its membership structure; chartered status and CITP; branches and specialist groups.

ORGANISATIONS AND THEIR STRUCTURE

Limited companies and the roles of directors and members; the advantages of limited company status for commercial organisations. Other legal forms of organisation. Takeovers and mergers.

The concept of delegation and specialisation. Management structures: structure by function, by product, by market sector, and by region. Levels of management (senior, middle, junior, etc). The concept of delegation and specialisation.

FINANCE

The financial structure of companies. The requirements for financial disclosure imposed by statute and by stock exchanges. Capital items and depreciation. The balance sheet, the profit and loss account, and the cash flow statement.

MANAGEMENT ACCOUNTING

Costing: direct and indirect costs; fixed and variable costs; overheads, corporate and divisional. Treatment of overheads in costing. Costing of labour. Costing (as opposed to estimating) of IT projects. The effect of cost and other factors on the pricing of software.

Cash flow and its importance; cash flow forecasts, the need for working capital. Discounted cash flow analysis and its use in the assessment of capital projects. Simple budgeting.
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LEGAL OBLIGATIONS

The Data Protection Act 1998, the Computer Misuse Act 1990 and subsequent changes. The Equalities Act 2010 as it applies to information systems.


INTELLECTUAL PROPERTY


THE INTERNET

The application of the law relating to issues such as privacy, defamation, and intellectual property rights to the Internet.


Cross-border jurisdiction and law enforcement, with specific reference to spam, malware and obscene material.

PROFESSIONAL CODES OF CONDUCT AND THEIR LIMITATIONS


HUMAN RESOURCES MANAGEMENT


The SFIAplus™ (Skills Framework for the Information Age) model; continuing professional development.

Techniques for recruitment and selection. Human resources planning.

The Equalities Act 2010 as it applies to employment practices.
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Practice

The effect of information systems on jobs. Job design: specialisation, rotation, enlargement and enrichment.

Appraisal and Management by Objectives. Continuing professional development.

Remuneration schemes, planning and control. Job evaluation.