

## Stage: Formation 2

### Subject Title: Information Systems

Examination Duration: 3 Hours

#### Aim

The aim of this subject is for students to develop an understanding of the role and application of Information Systems (IS) and Information Technology (IT) in the management and control of organisations. It provides the basis for the further development of students for the roles of manager, advisor, assurance provider and designer of IS and IT.

#### Information Systems as an Integral Part of the Syllabus

This is an essential subject for the later study of *Auditing, Audit Practice & Assurance Services and Strategy & Leadership*. Students will develop their understanding of selecting and advising on the implementation of appropriate systems, processes, controls and solutions in a business environment.

Stage	Subject	Subject	Subject	Subject	Subject	Subject
P2	Strategic Corporate Finance	Strategic Performance Management	Advanced Corporate Reporting	Strategy & Leadership	Audit Practice and Assurance Services	Advanced Taxation
P1		Managerial Finance	Corporate Reporting	Corporate Laws and Governance	Auditing	
F2		Management Accounting	Financial Accounting	<b>Information Systems</b>	Taxation	
F1		Business Mathematics & Quantitative Methods	Economics & The Business Environment	Business Laws		

The above table shows the linkages between *Information Systems* and the subjects highlighted. The capabilities developed will be built upon in the study of the subjects highlighted above.

#### Learning Outcomes

On successful completion of this subject students should be able to:

- Explain the role of information systems in today's competitive business environment.
- Appraise and discuss the major management challenges to building and using information systems in organisations.
- Recognise and discuss ethical, social, and legal issues in the design and use of information systems.
- Analyse how information systems support various business strategies for competitive advantage.
- Analyse and discuss the challenges posed by strategic information systems and management solutions.
- Examine the role of Internet technology in facilitating

management and coordination of internal and interorganisational business processes.

- Assess the challenges posed and opportunities offered by electronic business and electronic commerce and management solutions.
- Identify the challenges posed and opportunities offered by data resource management and management solutions.
- Evaluate the challenges of managing IT infrastructure and management solutions.
- Discuss alternative methods for building information systems and alternative methodologies for modelling systems.
- Explain what 'eXtensible Business Reporting Language' (XBRL) is and describe how it improves the reliability and ease of communicating complex financial

information among internal and external users.

- Critically analyse Information Technology based case studies, thus incorporating their strategic and practical knowledge of Information Systems to real life business situations.

#### Syllabus

##### 1: THE DIGITAL FIRM

**CL\***

- Describe and discuss why information systems should be employed. 2
- Approaches to Information Systems. 2
- The role of information systems. 2
- The role of information systems in business strategy. 2

\*CL: Competency Level

• Information systems support in the decision making process.	2	<b>4: ELECTRONIC BUSINESS &amp; MOBILE COMMERCE</b>		<b>5.2 COMPUTER SOFTWARE</b>	
• Information systems and management issues.	2	• The Internet: new information technology infrastructure for the Digital Firm.	2	• Operating systems.	1
• Ethical, social, and political issues of information systems.	2	• Internet platforms.	2	• Application software packages.	1
• The impact of contemporary information systems and the Internet on the protection of individual privacy and intellectual property.	2	• The use of electronic business and electronic commerce.	2	• Programming languages.	1
• The role of information systems in today's competitive business environment.	2	• Technologies used for electronic business and electronic business models.	2	• Managing software assets.	1
• The impact of the Internet and Internet Technology on business and government.	2	• Internal and external applications of electronic business and electronic commerce.	2	• Contemporary software platform trends.	1
• Defining an information system from both a technical and business perspective and distinguishing between computer literacy and information systems literacy.	2	• Management issues associated with electronic business.	2	• eXtensible Business Reporting Language (XBRL).	2
• The major management challenges to building and using information systems in organisations.	2	• The impact of Internet Technology on value propositions and business models.	2	<b>5.3 TELECOMMUNICATIONS AND NETWORKS</b>	
<b>2: TYPES OF INFORMATION SYSTEMS IN BUSINESS</b>		• The impact of electronic commerce on consumer retailing and business-to-business transactions.	2	• Components and functions of telecommunications systems.	1
• Information systems supporting the major business functions: sales and marketing, manufacturing and production, finance and accounting, and human resources.	2	• Payment systems for electronic commerce.	2	• Communication networks.	1
• The relationship between organisations, information systems, and business processes.	2	• The role of Internet Technology in facilitating management and coordination of internal and interorganisational business processes.	2	• eBusiness and eCommerce technologies.	1
• Transaction Processing Systems.	2	• The challenges posed by electronic business and electronic commerce and management solutions.	2	• Networking/telecommunications platforms.	1
• Office Information Systems.	2	• Wireless transmission media and devices, cellular network standards and generations, and standards for mobile Web access.	2	• Consulting and system integration services.	2
<b>3: FUNCTIONS OF INFORMATION SYSTEMS</b>		• M-commerce in business and m-commerce applications.	2	<b>5.4 DATABASE AND FILE ORGANISATION</b>	
• The functions of Information Systems.	2	• Wireless applications in business.	2	• The file organisation approach.	1
• Relationships between different information systems and where information systems are used within the firm.	2	<b>5: INFORMATION TECHNOLOGY</b>		• The database management systems (DBMS) approach.	1
• Information systems support for business strategies for competitive advantage.	2	<b>5.1 COMPUTER HARDWARE</b>		• Database management systems (DBMS) vs. file organisation methods.	1
• The challenges posed by strategic information systems and management solutions.	2	• The stages of IT infrastructure evolution.	1	• Types of databases.	1
		• The technology drivers of IT infrastructure evolution.	1	• Database purchase issues.	1
		• Contemporary computer hardware platform trends.	1	• Database design & maintenance issues.	1
		• The components of a computer system.	1	• Database design principles.	1
		• Computer processing, storage, input and output technology.	1	• Database trends.	1
		• Types and classifications of computer systems.	1	• Managing data resources and management solutions.	1
		• Managing hardware assets.	1	<b>6: ORGANISATIONAL SUPPORT SYSTEMS</b>	
		• Managing IT infrastructure and management solutions.	1	<b>6.1 KNOWLEDGE BASED SYSTEMS</b>	
				• Knowledge Based Systems.	2
				• The flow of Knowledge Management.	2
				• The control of Knowledge Management.	2
				<b>6.2 MANAGEMENT DECISION SUPPORT TOOLS</b>	
				• Decision Support Systems.	2
				• Group Decision Support Systems.	2
				• Executive Support Systems.	2
				• Knowledge Working	2

## 7: INFORMATION SYSTEM DEVELOPMENT

- The System Development Life Cycle (SDLC). 1
- Alternatives to SDLC e.g. Prototyping, RADE, etc. 1
- System development and management considerations. 2
- The impact of building new systems on organisational change. 2
- Developing information systems that support an organisation's business plan. 2
- The core activities in the systems development process. 1
- Alternative methods for building information systems and alternative methodologies for modelling systems. 1
- The challenges of building information systems and management solutions. 2

## 8: Feasibility Study & Business Value of Systems

- Aims, objectives, problem identification, responsibilities, planning, management and lifecycle. 2
- Cost benefit analysis and final outputs. 2
- Models for understanding the business value of information systems. 2
- Change management requirements for building successful systems. 2

## 9: SYSTEM SECURITY AND CONTROL

- The need for special protection from destruction, error, and abuse of information systems. 2
- The business value of security and control. 2
- Organisational and managerial frameworks for security and control. 2
- System vulnerability and abuse. 2
- Preventative maintenance techniques and security controls. 2
- Disaster recovery planning. 2
- Quality control and quality assurance. 2
- Tools and technologies for safeguarding information resources. 2

- Identify the challenges posed by information systems security and control and management solutions. 2
- Data Protection Act 1988 and Data Protection (Amendment) Act 2003 2

## Assessment Strategy

### Examination Approach

The examination seeks to test students' knowledge and understanding of the role and application, analysis and evaluation of Information Systems and Information Technology.

Question 1 is a case study set within a real life business context. This assesses the ability to transfer strategic and practical knowledge of Information Systems to a real life business situation. It also tests the ability to assimilate information, identify problems / issues and recommend appropriate solutions.

Question 2 is a compulsory 15 mark question. This essay type question facilitates the examination of a range of topics across different syllabus areas.

Questions 3 to 6 have, as their major element, one of the main topic areas from the syllabus. Students need to demonstrate sufficient knowledge relating to technology and developments to effectively contribute to the formulation of an information technology strategy.

### Examination Format

The examination is unseen, closed book and 3 hours in duration. It is divided into two sections. Section A is compulsory and consists of an unseen mini - case study for 25 marks and a second 15 mark question. Section B has four 20 mark questions. Students are required to answer 3 questions out of 4 from this Section B.

## Marks Allocation

### Section A

Compulsory Question (Mini - Case Study)	25
Question 2	15

### Section B

Choice of 3 questions out of 4 (20 marks each)	60
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**Total 100**

## Booklist

### Core Texts

Laudon and Laudon, Management Information Systems - Managing the Digital Firm, Publ. Prentice Hall, ISBN 13-9780136093688 / ISBN 10-013609368X. 11th EDITION.  
Data Protection Commissioners, General Information Pack.

### Manuals

### Supplementary Texts

Data Protection Act 1988, Government Publications.

Data Protection (Amendment) Act 2003, Government Publications.

O'Brien, Management Information Systems - A Managerial End-User Perspective (Irwin, International Student Edition).

Wright/Harcos, Micro Computer Applications in Accounting (McGraw Hill).

AccountancyPlus.

CPA students' eBulletin.

### Useful Websites (as at date of publication)

[www.cpaireland.ie](http://www.cpaireland.ie) - The Institute of Certified Public Accountants in Ireland.

[www.isc.ie](http://www.isc.ie) - Information Society Commission.

[www.isaca.org](http://www.isaca.org) - Information Systems Audit and Control Association (ISACA).

[www.bbc.co.uk/click](http://www.bbc.co.uk/click) - BBC's Technology Programme.

[www.iaa.ie](http://www.iaa.ie) - Irish Internet Association.

[www.ics.ie](http://www.ics.ie) - Irish Computer Society.

[www.thedigitalhub.com](http://www.thedigitalhub.com) - The Digital Hub Development Agency.

[www.enterweb.org](http://www.enterweb.org) - The Knowledge Portal for Small Business.

[www.clickz.com/stats/](http://www.clickz.com/stats/) - The Click Z Network.