



Core Syllabus

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A PLAN KNOWLEDGE AREA : USE AND MANAGEMENT OF INFORMATION SYSTEMS

A.1 Organisations and their Use of IT

A.1.1 Organisational types and structures

- 1) Define major organisational types, their characteristics and corresponding internal structures (e.g. hierarchical vs "flat"), addressing aspects of legal status (e.g. charity vs. partnership), size (SME vs corporation)
- 2) Describe the role IT plays in an organisation
- 3) Show, using diagrams, the workflow within a number of different organisational structures
- 4) Identify the purpose of IT within an organisation
- 5) Identify the impact differing structures have on the management of IT

A.1.2 The role of IT in information processing within an organisation

- 1) Differentiate between data and information
- 2) Show, using diagrams, information processing models
- 3) Classify the layers of information processing within an organisation
- 4) Describe the decision flow within these layers
- 5) Describe the role of IT in supporting Information Systems within an organisation

A.1.3 Internal/external environment

- 1) Show, using diagrams, the position of organisations within their environments
- 2) Define a system in terms of co-ordination, monitoring and control
- 3) Demonstrate how external and internal factors impact throughout environments

A.1.4 Business Plan

- 1) Define the attributes of a business plan
- 2) List the major techniques used in preparing business strategies
- 3) Detail the Information Technology that will deliver a given business plan

A.1.5 Business processes

- 1) Define basic business processes
- 2) List major applications deployed in supporting business processes
- 3) Compare how different organisations deploy different processes
- 4) Detail the IT requirements to improve organisational competitiveness

A.1.6 IS support for organisational management

- 1) Define the role(s) and responsibilities of management
- 2) Categorise the types of computer support for management
- 3) Define organisational knowledge, memory and learning
- 4) Describe the major decision-making and problem-solving techniques
- 5) Assess the support management Information Systems provide

A.1.7 Collaborative technology in organisations

- 1) Identify the attributes of different workflow systems
- 2) Distinguish between virtual team-working and physical, co-located team-working
- 3) Describe the features of collaboration and co-operation, teams and groups
- 4) Describe the main features of collaborative technologies
- 5) List the major factors for successful implementation of collaborative technologies

A.1.8 Computer Based Training and learning

- 1) Describe computer-based training
- 2) List the technical requirements for computer-based training, multimedia, etc.
- 3) Discuss the advantages and disadvantages of computer-based learning

A.1.9 The Information Society

- 1) Assess the impact of IT within society and its subsets
- 2) List the advantages and disadvantages of IT in society
- 3) Describe the digital divide

A.2 Management of IT

A.2.1 IT strategy

- 1) Understand the need for an IT strategy
- 2) Describe how to integrate the IT strategy with the business strategy
- 3) Relate IT strategy to business processes

A.2.2 The IT needs of different organisational structures

- 1) Describe differing IT requirements within given organisational scenarios
- 2) Describe appropriate matches between organisational need and IT
- 3) Compose a technology impact statement within a given situation

A.2.3 Typical IT functions and technology types

- 1) Detail the most common IT functions within an organisation
- 2) Describe the attributes of transaction processing systems, process control systems, planning systems, automation systems, and all types of MIS
- 3) Explain the concepts of databases, data mining and data warehousing

A.2.4 Systems Development versus systems procurement or outsourcing

- 1) Explain the situations that require Systems Development
- 2) Describe the human, technical and financial components of Systems Development
- 3) Explain the situations that require procurement or outsourcing
- 4) List the reasons behind outsourcing from a business perspective
- 5) Prepare a table of advantages and disadvantages for Systems Development and outsourcing
- 6) Prepare a checklist of factors for consideration prior to implementation of such policies

A.2.5 Staffing considerations

- 1) Describe the different roles played in developing and maintaining Information Systems
- 2) Describe the concept of End User Computing
- 3) Describe the advantages and disadvantages of Systems Development and outsourcing in relation to staff issues
- 4) Describe the need for Human Resources policies to retain staff, e.g. job mobility, skilled resources, cost of training

A.2.6 Quality Assurance

- 1) Describe the need for Quality Assurance in Information Systems
- 2) Describe major approaches to quality management (e.g. TQM).
- 3) Define the major risks associated with lack of quality in IS/IT
- 4) Explain the need for monitoring and evaluation of IT investments
- 5) Define Total Cost of Ownership (TCO)
- 6) List the items included in TCO
- 7) Describe the need for project planning
- 8) Describe the need for project costing

A.3 IT Economics

A.3.1 The concept of the client

- 1) Define the concept of stakeholders in a business
- 2) Describe the role played by IT staff in supporting the business
- 3) Describe different meanings of "client" in IT; e.g. users, external, internal

A.3.2 Business Plans and Feasibility Studies

- 1) Describe why IS/IT must support Business Plans
- 2) Describe the process of matching IT plans with business needs/plans
- 3) Define the "economic feasibility" of Information Systems
- 4) Describe the need for technical feasibility

- 5) Discuss why a system must be feasible from an organisational point of view

A.3.3 Costs and benefits

- 1) Describe the main approaches used to determine the business value of IT (e.g. Return on Investment)
- 2) Describe the business value of information
- 3) Describe how the benefits of IS/IT might be evaluated.
- 4) Define and differentiate between capital costs and operational (current) costs

A.3.4 Intellectual Capital

- 1) Understand the concept of "Intellectual Property" (IP)
- 2) Describe how IP can be valued (e.g. value of a brand name)

A.3.5 Evaluation of IT solutions

- 1) Define the strategic importance of evaluation
- 2) Describe the major methods for evaluation
- 3) List the items that are easy and difficult to measure
- 4) Describe how to compare results from various financial measures (e.g. ROCE)

A.4 Internet and the New Economy

A.4.1 New opportunities

- 1) Describe globalisation and the opportunities it can give to organisations
- 2) Describe the use of the Internet as a tool for creating new opportunities
- 3) Describe the use of extranets in business

A.4.2 Trends in commerce and marketing in the New Economy

- 1) Describe the major effects of e-business on organisations
- 2) Describe examples of the use of IS/IT to effect changes
- 3) Describe the effect of Global markets on an organisation
- 4) Explain the purpose of Customer Relationship Management tools
- 5) Describe the use of Supply Chain Management tools
- 6) Understand the principles of Enterprise Resource Planning

A.4.3 New mechanisms and structures in business

- 1) Describe how IS/IT can increase an organisation's flexibility
- 2) Define "virtual organisation"
- 3) Describe how "virtual organisations" can operate
- 4) Describe how technology can redefine organisational boundaries
- 5) Describe the "unique customer" concept and its main technology implications

A.5 Project Management (PM)

A.5.1 Basic concepts

- 1) Describe the differences between IT projects and other business projects
- 2) Relate the concepts of PM to IT and IS
- 3) Detail the elements of project control – activities, resources, deliverables, plans
- 4) List the major factors which ensure successful PM
- 5) List the major factors that hinder successful PM

A.5.2 Time, cost and quality

- 1) Analyse the impact time, cost and quality have on each other and on PM
- 2) List the major models used to calculate the impact of the above
- 3) List the major factors that affect the above
- 4) State the most effective methods for estimating the above

A.5.3 Project organisation

- 1) Identify the principal elements of project organisation
- 2) Compare the different alternatives available
- 3) Describe the people involved in a project – for example:- Project Manager, team, steering committee
- 4) Prepare an outline project plan for a given scenario

A.5.4 Methods and tools for project planning and monitoring

- 1) Describe the main components of different PM techniques and methodologies eg PERT, PRINCE2®
- 2) List the main functional elements of computer- based PM tools

A.5.5 Project evaluation and decision-making techniques

- 1) Describe how to perform a risk analysis on a project proposal
- 2) List methods for costing and evaluating a project plan
- 3) List quantitative measures which can be used in project planning and evaluation
- 4) List qualitative measures which can be used in project planning and evaluation

A.5.6 Project and contract management

- 1) List the phases of a typical project
- 2) Describe the need for a contract
- 3) List the items which should be covered in a contract – deliverables, dates, etc.
- 4) Describe the need for milestones, checkpoints, reviews

A.5.7 Quality and Information Systems

- 1) List the benefits derived from Quality Assurance in Information Systems
- 2) List the costs/risks relating to lack of QA in IS
- 3) Describe how QA should be a part of all IS/IT projects
- 4) List the benefits of corporate standards e.g. documentation templates

A.5.8 Quality Assurance methods and techniques

- 1) List the major methodologies used for Quality Assurance
- 2) Describe how QA techniques can measure quality
- 3) Describe the implementation of a QA methodology
- 4) Describe the use of a QA technique

A.6 Presentation and Communications Techniques

A.6.1 Teams

- 1) Explain the concept of groups and teams
- 2) List the roles involved in teams
- 3) Describe the features of collaboration and co-operation, teams and groups

A.6.2 Communicating IT concepts and definitions

- 1) Define the need for a common understanding of jargon and IT terminology

A.6.3 Dialogue between IT specialists and non-IT business people

- 1) Define the concept of “core business” and how IS/IT can assist in achieving corporate aims
- 2) Describe how IS/IT fits into the organisation as an enabler
- 3) Describe how IS/IT fits in as part of the organisation

A.6.4 Presenting the case for change

- 1) Describe the necessity for effective communication in business
- 2) List motivating factors for the acceptance of new technology
- 3) List the reasons why there might be resistance to change

A.6.5 Audio-Visual (AV) Tools

- 1) List the most widely used audio-visual tools
- 2) Describe where audio-visual tools might be used
- 3) Describe the benefits of using AV tools
- 4) List the technical requirements for use of AV tools

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A.7 Legal and Ethical Issues

A.7.1 Intellectual Property and copyright

- 1) Define ownership of intellectual property and copyright
- 2) Describe breaches of copyright
- 3) Describe methods to protect intellectual property and copyright
- 4) Define software piracy

A.7.2 Legal issues

- 1) Describe the main legal issues related to the use of IT (e.g. privacy, copyright, IPR, software theft and misuse, health and safety)
- 2) Describe the principles contained in national legislation related to the above issues in IT
- 3) Describe the principles contained in EU legislation related to these IT issues

A.7.3 Ethics and codes of conduct

- 1) Analyse all levels of decisions from organisational, ethical and moral standpoints
- 2) Address issues of personal and professional privacy in the use of IT systems
- 3) Describe codes of professionalism and codes of conduct regarding the use of IT systems
- 4) Review codes of conduct relevant to organisations

A.7.4 Security

- 1) Describe the potential threats to Information Systems and technology
- 2) Identify specific methods and technologies that will protect a system
- 3) Describe the scope of a security policy
- 4) Describe the role of a Security Officer
- 5) Know and distinguish different levels of security policies
- 6) Evaluate security systems in a given scenario

A.7.5 Health and Safety (H & S)

- 1) Describe the special H&S considerations pertinent to hardware
- 2) Describe actions to minimise or eliminate potential H&S hazards
- 3) Be aware of the main relevant EU and national H&S legislation and directives

B BUILD KNOWLEDGE AREA : DEVELOPMENT AND IMPLEMENTATION OF INFORMATION SYSTEMS

B.1 Systems Development Process and Methods

B.1.1 Application software and system software

- 1) Recognise and describe the difference between systems software and application software
- 2) Name some examples of both categories
- 3) Explain the use of application and systems software

B.1.2 Systems Development principles and methodologies

- 1) Understand and describe the basic steps of Systems Development
- 2) Differentiate between and give examples of different models of Systems Development
- 3) Describe the life-cycle of a system

B.1.3 Systems Development tools

- 1) Explain the use of tools (e.g. "Upper", "Lower" and Integrated CASE tools) at different stages of Systems Development
- 2) Understand and describe the strengths and weaknesses of different development tools and techniques
- 3) Demonstrate use of a simple development tool

B.1.4 Software and system testing

- 1) Describe the different types of testing and review applied during the systems lifecycle (e.g. as defined in the V-model)

B.1.5 System implementation

- 1) Explain the use of tools at systems implementation (i.e. the phase within a System Development Lifecycle (SDLC) incorporating the release of software to users, training users and providing initial support for users) and the different steps in using one of the tools
- 2) Understand and describe the strengths and weaknesses of different implementation tools

B.1.6 System control and safety

- 1) Describe in outline the different types of systems which can protect company-sensitive data (e.g. physical, procedural).
- 2) Describe the day-to-day security routines in a distributed system (e.g. back-up procedures, access control).

B.1.7 Trends in Systems Development and deployment

- 1) Describe different Systems Development approaches
- 2) Describe the major technical architectures for which systems are being developed (e.g. two-tier client server variants, three-tier client server, "n" tier web-based, legacy mainframe extension and integration)

B.2 Data Management and Databases

B.2.1 Data and information

- 1) Understand the use of data in a database system
- 2) Understand the advantages and the problems of storing data and information, in relation to: data redundancy and inconsistency, integrity problems, flexibility in data, concurrent access and security.
- 3) Understand the difference between data and information

B.2.2 Data and modelling

- 1) Know about data abstraction, physical level, conceptual level and view level
- 2) Know about different groups of data models: object-based logical model, record-based logical model and physical data model
- 3) Know the principles of object-based logical models: i.e. the entity-relationship model, the object-oriented model
- 4) Know the difference between the record-based logical models: network model and hierarchical model

B.2.3 Files and databases

- 1) Explain the difference between a file management system and a Database Management System
- 2) Describe the components of a database system, including: data files, data dictionary, indices and statistical data
- 3) Know about file organisation and the advantage/disadvantage with files based on: fixed length records and variable length records

B.2.4 Database Management Systems

- 1) Explain the business areas where Database Management Systems are used, and why
- 2) Explain the components of a Database Management System: programs and types of data
- 3) Describe in general terms: Data Definition Language (DDL) Data Manipulation Language (DML), Database Manager, Database Administrator (DBA), database users

B.2.5 Data Warehousing and data mining

- 1) Explain the concept and components of a Data Warehousing system
- 2) Describe the functions of data mining
- 3) Describe where Data Warehousing systems are mostly used

B.2.6 The relational model

- 1) Describe the benefits of a relational model: redundancy etc.
- 2) Be able to explain simple examples of the process of normalisation for 1. normal form to 3. normal form (nf)

B.2.7 Queries and reports

- 1) Know the difference between procedural and non-procedural query languages
- 2) Describe the fundamental operations of the relational algebra
- 3) Describe the different components of a SQL language: DDL, DML, View etc.
- 4) Use and demonstrate SQL operations: where, from, select etc.

B.2.8 Database administration

- 1) Know the definition and function of a Database Management System
- 2) Know the functions of a Database Administrator (DBA)
- 3) Explain the contents of some of the most important database administration procedures: schema definition, storage structure and access methods, schema and physical organisation modification, authorisation for data access, etc.

B.2.9 Security and integrity of data

- 1) Explain in general the different security and integrity problems represented by the acronym CIA (Confidentiality, Integrity, Availability) : e.g. integrity constraints, accidental loss of data integrity, accidental loss of data consistency and intentional (malicious) access to the database.
- 2) Give examples of different security items grouped as: human security, physical security, Operating System security and database security
- 3) Describe recovery schemes based on different types of failure like: logical errors, system errors, system crash and disk failure.

B.3 Programming

B.3.1 Software design methods and techniques

- 1) Know different programming design methods, such as Object-Oriented (OO) design, "top down" design, structured programming
- 2) Know how to use abstraction as a technique of problem-solving and design
- 3) Understand the specific needs of legacy systems in program design

B.3.2 Data structures and algorithms

- 1) Understand different data structures such as records, arrays, and linked lists
- 2) Understand the relationship between different widely used algorithms and the data structures above

B.3.3 Types of programming languages

- 1) Know the main types of programming languages (different generations, functional, procedural, OO-based)
- 2) Understand the role of syntax in programming languages
- 3) Understand the difference between compilation and interpretation of programming languages

B.3.4 Introduction to programming concepts

- 1) Understand the most important constructs of the programming language i.e.:
 - i. Input/Output (IO)
 - ii. Control Statements
 - iii. Arithmetic and logical operations

B.3.5 Testing

- 1) Understand the main functions of automatic test tools
- 2) Demonstrate knowledge of test methodologies
- 3) Understand the main features of module, link and system testing

B.3.6 Documentation

- 1) Demonstrate knowledge of basic documentation requirements for software deliverables and development (e.g. Structured English, decision trees)
- 2) Understand the concept of well-structured programs and related documentation

B.3.7 Maintenance

- 1) Know how to document changes in software and program documentation
- 2) Give examples of methods that can be used to attain quality in program maintenance, e.g. code inspections

B.3.8 Programming examples

- 1) Understand small program segments constructed from a given hypothesis

B.4 User Interface and Web Design

B.4.1 Human-computer interaction

- 1) Understand common communications theory: sender, messages, receiver
- 2) Understand how to communicate information

B.4.2 Graphic design

- 1) Use basic graphic principles, based on normal written text e.g. font size, percentage white space
- 2) Use basic graphic principles for illustrations and colours
- 3) Use standard picture manipulation

B.4.3 Current methods and techniques

- 1) Describe the tools for development of a web-site
- 2) Construct structure diagram for design of web-site
- 3) Describe the major methods for navigation
- 4) Know the principles of how to use story boards, rough drafts etc.

B.4.4 Guidelines and standards for user interfaces

- 1) Describe tools/guidelines for developing user-friendly web-sites
- 2) Define "best practice" for good web text
- 3) Define test models for testing of user interface requirements/goals

B.4.5 Characteristics of the web, its possibilities and constraints

- 1) Know the history behind the world-wide-web
- 2) Explain the traditional components of a web-site
- 3) Explain the use of web-sites in a company, internal and external
- 4) Describe models for analysing and revealing the need within the target group
- 5) Be aware of the disadvantages of web-sites, giving examples

B.4.6 Hypertext and hypermedia

- 1) Describe the use of hypertext and hypermedia
- 2) Use hypertext and hypermedia

B.4.7 Central problems in web design

- 1) Understand the needs of the target group for the web-site
- 2) Understand the risks of having too many message on one page
- 3) Understand the problems around a poor mix of colours
- 4) Understand the need for easy navigation on the site

B.4.8 Designing web pages

- 1) Be able to use the basic commands in HTML
- 2) Understand the main areas of HTML (hard format, soft format, special characters, dividers, alignment, headers, image-tags, backgrounds, colours, links, lists, tables, forms and frames)
- 3) Understand the concept of "style sheets" and their use in design

C OPERATE KNOWLEDGE AREA : OPERATION AND SUPPORT OF INFORMATION SYSTEMS

C.1 Computing Components and Architecture

C.1.1 Computer hardware components

- 1) Describe the main components of a computer system and their functions
- 2) Describe the main types of peripheral units and their functions
- 3) Understand the parameters which characterise any type of peripheral units
- 4) Describe the main types of memory technology
- 5) Identify various types of buses in a computer system
- 6) Describe the concept of instruction pipelining
- 7) Describe the concept of instruction-level parallelism
- 8) Understand the parameters which characterise a microprocessor: (clock frequency, pipeline stages, caching system, chip size)

C.1.2 Computer Architecture

- 1) Show, using diagrams, the architecture of a general purpose computer
- 2) Describe the concept of a multiprocessor machine
- 3) Describe the concept of a Memory Hierarchy

C.1.3 Multimedia computing components

- 1) Know the standard multimedia types (audio, music, graphics, image, video, telephony, TV)
- 2) Know the main multimedia I/O devices (scanners, digital camera, microphone, etc.)
- 3) Know the major multimedia storage standards (CD-ROM, DVD, Magneto Optical disk)

C.2 Operating Systems

C.2.1 Principles

- 1) Describe the functions of a typical Operating System
- 2) Describe the different types of Operating System (Time-sharing, Real-time, Batch)
- 3) Describe the concept of Application Program Interfaces
- 4) Describe how the resources of a computer system are managed by software

C.2.2 Concurrent and parallel processes

- 1) Justify the presence of concurrency inside an Operating System
- 2) Describe the mutual exclusion problem
- 3) Describe the concept of a process
- 4) Describe the concept of a thread
- 5) Describe a context switch operation

C.2.3 Memory management

- 1) Explain the concept of virtual memory
- 2) Describe how virtual memory is realised in hardware and software
- 3) Describe the thrashing concept
- 4) Describe the concept of memory hierarchy
- 5) Describe the functions of a file system

C.2.4 Security and protection

- 1) Recognise the need for protection and security in a computer system
- 2) Describe the protection mechanisms implemented by Operating Systems
- 3) Understand the difference between identification and authentication
- 4) Describe the principles of access control
- 5) Recognise the need for recovery and back-up
- 6) Describe the concept of "backdoor", Trojan horse and computer virus threats

C.2.5 Examples of Operating Systems

- 1) Describe the main features of the Unix or Linux Operating System
- 2) Describe the main features of the W2000 or Windows XP Operating System

C.3 Communications and Networks

C.3.1 Communication principles

- 1) Understand the difference between an analog and a digital signal
- 2) Understand the transformation between an analog signal and its corresponding digital version
- 3) Describe the concepts of circuit switching and packet switching
- 4) Describe the concepts of streams and datagrams
- 5) Describe the role of the main network standardisation bodies

C.3.2 Network components and architectures

- 1) Describe the components of a network and their roles
- 2) Describe the different characteristics of the transmission media (twisted pair, Coaxial cable, fiber optic, microwaves)
- 3) Describe how the components of a network are connected to each other in practice
- 4) Describe the roles of interconnecting devices (hub, switch, router)
- 5) Describe the standard network topologies
- 6) Differentiate between the concepts of LAN and WAN
- 7) Name the major LAN Standards

C.3.3 Communication protocols

- 1) Describe the ISO 7-layer reference model
- 2) Describe the instantiation of the ISO reference model in TCP/IP
- 3) Describe how a packet is routed over the Internet
- 4) Understand the differences between TCP and UDP
- 5) Know the major differences between a connection-oriented and a connectionless protocol
- 6) Understand the concept of network congestion and the mechanisms for avoiding it

C.4 Network Services

C.4.1 Network security

- 1) Know the main security threats in networks (sniffing and spoofing)
- 2) Describe the scope of cryptography
- 3) Differentiate between secret-key algorithms from public key algorithms
- 4) Describe a "strong" authentication protocol
- 5) Understand how to use cryptography for protecting networks

C.4.2 Domain Name System (DNS)

- 1) Define the scope of the DNS
- 2) Describe the naming of Internet hosts
- 3) Describe the concept of resource descriptor
- 4) Outline how a Domain Name is translated into an IP address

C.4.3 The world-wide-web (WWW)

- 1) Describe the WWW as a client server application
- 2) Describe the role of the server
- 3) Describe the role of the client: browser
- 4) Describe the role and the functions of the Hypertext Transmission Protocol (HTTP)
- 5) Understand the concept of Universal Resource Locator (URL)
- 6) Describe the main characteristics of Hypertext Mark-up Language (HTML)
- 7) Describe the concept of the Common Gateway Interface (CGI)
- 8) Describe the concept of an applet

C.4.4 E-mail

- 1) Understand the role of an e-mail client
- 2) Understand the role of an e-mail server
- 3) Understand the role of an e-mail gateway
- 4) Describe the SMTP protocol
- 5) Describe the POP3 protocol
- 6) Describe the Internet Message Access Protocol (IMAP) protocol

C.4.5 Multimedia impact

- 1) Know the network impact of the most important multimedia tools
- 2) Know about the resource needs of a major multimedia application
- 3) Describe the characteristics of a server computer system that has to host a multimedia application

C.5 Wireless and Mobile Computing

C.5.1 Principles of wireless communication

- 1) Describe technologies used for wireless communications
- 2) Describe the major wireless standards
- 3) Know the problems characterising wireless and mobile computing
- 4) Know the limitations of the wireless technology

C.5.2 Wireless networks

- 1) Describe the main components of a Wireless LAN
- 2) Know the compatibility of different technologies
- 3) Describe the main components of a satellite-based network

C.5.3 Protocols for mobile stations

- 1) Describe the functions of the main protocols for mobile stations (Mobile IP, Wireless Application Protocol (WAP), Bluetooth)
- 2) Understand the range of applicability of each protocol

C.6 Network Management

C.6.1 Principles of Network Management

- 1) Describe the main functions of a Network Management System
- 2) Describe the different parameters which can be managed in a network (performance, failures, configuration settings)
- 3) Describe the different architectures of Network Management systems

C.6.2 The Simple Network Management Protocol (SNMP)

- 1) Describe the main components of the protocol and their interaction
- 2) Describe the main services provided by the protocol
- 3) Describe the main limitations of the protocol

C.6.3 Tools for Network Management

- 1) Name the most important Network Management tools
- 2) Understand the differences between a System Management tool and a Network Management tool
- 3) Understand the system requirements for operating a Network Management tool

C.7 Service Delivery and Support

C.7.1 Customer relationships and Service Level Agreements

- 1) Describe the Service Level Management process and identify its benefits
- 2) Name the main elements of a Service Level Agreement
- 3) Compare the uses and purposes of Service Level Agreements, underpinning contracts and Operational Level Agreements

C.7.2 Capacity and Contingency Planning

- 1) Describe the three sub-processes (business, service and resource) as defined within ITIL®-based Capacity Management and explain the importance of each
- 2) Identify the purpose and describe the main elements of a Capacity Plan
- 3) Explain the concepts of risk, threat and vulnerability and give examples of each
- 4) Give examples of risk reduction measures
- 5) Identify the purpose and describe the main elements of a contingency/service continuity plan

C.7.3 Availability Management

- 1) Identify the purpose and benefits of Availability Management as referenced in ITIL® and define the main terms used (availability, reliability, failure, recovery)
- 2) Compare some of the commonly-used measures of availability (percentage availability, frequency of failure, mean time between failures, impact of failure)
- 3) Name the main Availability Management methods and techniques (such as Component Failure Impact Analysis (CFIA), CRAMM, Fault Tree Analysis (FTA))

C.7.4 Service Desk

- 1) Explain the purpose of a Service Desk in a service support organisation
- 2) Identify the different types of Service Desk and describe the circumstances in which each is appropriate
- 3) Define the main elements of an ITIL®-based incident management system

C.7.5 Change Management

- 1) Explain the importance of managing change in an IT environment
- 2) Construct a basic ITIL® -based change management procedure
- 3) Define the purpose of a Request for Change and propose the essential elements that it should contain

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