

## AS GCE ICT Unit G061 Revisions

### 3.1.1. Data, information, knowledge and processing

Ref	Old	New	Comment
C	<b>Describe</b> different methods used to convey information	<b>Compare</b> different methods used to convey information	Change of keyword, describe to compare.
H	<b>Describe how the following</b> can affect the quality of the information produced	<b>Describe the following and how they</b> can affect the quality of the information produced	Descriptions can now be asked.
I	<b>Describe</b> the advantages and disadvantages of encoding data	<b>Explain</b> the advantages and disadvantages of encoding data, <b>and describe different methods that can be used to encode data</b>	Keyword has changed and additional content – methods of encoding.
J	Describe and give examples of the following validation methods: range, type, check digit, length, lookup, picture/format and presence, and their purpose,	Describe and give examples of the following validation methods: range, type, check digit <b>(modulus 11 and ISBN)</b> , length, lookup, picture/format and presence, and their purpose,	Methods for check digit calculations added
L	<b>Explain</b> the difference between back-up and archiving of data	<b>Describe</b> the difference between back-up and archiving of data	Keyword changed from Explain to Describe

### 3.1.2 Software and hardware components of an information system

Ref	Old	New	Comment
A	Describe the difference between hardware and software, <b>giving examples of each to illustrate the description and</b> explain the lack of standardisation affecting both hardware and software;	Describe the difference between hardware and software and explain the lack of standardisation affecting both hardware and software;	Removed <b>,giving examples of each to illustrate the description</b>
C	Describe specialist hardware devices for physically disabled users: puff-suck switch, foot mouse, eye typer, Braille printers and keyboards, speakers and microphones;	Describe specialist hardware devices for physically disabled users: puff-suck switch, foot mouse, eye typer, Braille printers and keyboards, speakers and microphones <b>and justify their use for given situations;</b>	Added: and justify their use for given situations;
D	Describe specialist software for physically disabled users: predictive text, sticky keys, zoom, voice recognition;	Describe specialist software for physically disabled users: predictive text, sticky keys, zoom, voice recognition <b>and justify their use for given situations;</b>	Added: and justify their use for given situations;

### 3.1.3 Characteristics of standard applications software and application areas

Ref	Old	New	Comment
A	<b>Identify basic tasks that standard/generic applications software can readily be used for: letter writing, memos, reports, flyers, brochures, posters, business cards, graphs, modelling, forecasting, data handling, sorting, searching, mail merging, web page authoring, presentations;</b>	Removed and replaced with:  Describe different types of applications software and justify their use for given tasks.	New bullet point A
B	Describe the characteristics of the following applications: <b>school administration</b> and teaching systems, stock control, booking systems, on-line training systems, timetabling and route finding systems, <b>customer records systems and on-line banking systems;</b>	Describe the characteristics and use of the following systems: <b>personnel</b> , stock control, invoicing, booking, timetabling, route finding and training	Applications have been merged and new ones added.
C	Describe the purpose and characteristics of wizards, <b>styles</b> , templates and macros, describing the advantages and disadvantages of their use;	Describe the purpose and characteristics of wizards, style <b>sheets</b> , templates and macros, describing the advantages and disadvantages of their use;	Addition of sheets as opposed to styles.
H	Describe how master documents/slides, styles and templates can be used to create a consistent house style;	Describe how master documents/slides, styles, <b>style sheets</b> and templates can be used to create a consistent house style;	Style sheets as opposed to just styles added.
I	<b>Describe how to import/export files between standard/generic applications with no common format;</b>	<b>Explain the need for different file types and the advantages and disadvantages of having different file types.</b>	Old bullet point removed and new one put in its place.
J	<b>Explain the needs of different users of standard/generic applications software.</b>		Removed

### 3.1.4 Spreadsheet concerns

Ref	Old	New	Comment
B	<b>Explain</b> how variables, formulae, rules and functions are used in modelling software;	<b>Describe</b> how variables, formulae, rules and functions are used in modelling software;	Key word changed

### 3.1.5 Relational database concepts

Ref	Old	New	Comment
B	Identify tables, records, fields, primary keys and foreign keys, and <b>define relationships between entities using an</b> entity relationship diagram for a given scenario;	Identify tables, records, fields, primary keys and foreign keys, <b>and interpret and create</b> entity relationship diagram for a given scenario;	Explicitly asked to interpret and create ERDs
G	Describe dynamic and static parameter queries and simple and complex queries and explain when and how they might be used.	Describe dynamic and static parameter queries and simple and complex queries and explain when and how they might be used <b>giving examples of use.</b>	Added requirement to give examples of queries.

### 3.1.6 Applications software used for presentation and communication of data

Ref	Old	New	Comment
B	Describe how word processing and desktop publishing (DTP) software can be used with data from a spreadsheet or database for mail merge, and describe the advantages of using this technique;	Describe how word processing and desktop publishing (DTP) software can be used with data from a spreadsheet or database for mail merge, and describe the advantages <b>and disadvantages</b> of using this technique;	Added disadvantages of mail merge
D	<b>Discuss</b> the advantages and disadvantages of using clip art images and collections of thumbnail images;	<b>Describe</b> the advantages and disadvantages of using clip art images and collections of thumbnail images;	Keyword changed.
F	Describe the advantages and disadvantages of using graphic libraries and their use in the following applications: <b>kitchen design</b> , cartography and network design;	Describe the advantages and disadvantages of using graphic libraries and their use in the following applications: <b>interior design, landscaping</b> , cartography and network design;	Changed and added applications that graphic libraries can be used for.
G		<b>Compare image libraries, clipart libraries and graphic libraries</b>	This is a new bullet point

### 3.1.7 The role and impact of ICT

Ref	Old	New	Comment
B	discuss possible future developments in ICT and their impact on the following application areas: transport, medicine, the disabled, education, entertainment, shopping, marketing and communication;	discuss possible future developments in ICT and their impact on the following application areas: transport, medicine, the disabled, education, entertainment, <b>digital piracy</b> , shopping, marketing and communication;	Digital piracy added as discussion area
F	<b>Explain why standards are required and the impact of different organisations and networks having different standards;</b>		Removed from updated specification
F		<b>Describe the purpose and activities of professional bodies, eg BCS;</b>	New bullet point added
G		<b>Explain the advantages and disadvantages of belonging to a professional body;</b>	New bullet point added

## A2 GCE ICT Unit G063 Revisions

### 3.3.1. The Systems Cycle

Ref	Old	New	Comment
B	<p><b>Discuss</b> different approaches an analyst might use when investigating a system: questionnaires, interviews, meetings, document analysis, observation;</p>	<p><b>Describe the advantages and disadvantages of</b> different approaches an analyst might use when investigating a system: questionnaires, interviews, meetings, document analysis, observation;</p>	Keyword changed.
G	<p>Describe, interpret and create critical path analysis (CPA) and Gantt charts <b>as tools for project planning;</b></p>	<p>Describe, interpret and create critical path analysis (CPA) and Gantt charts, <b>and for each explain its suitability for use in a given application</b></p>	Addition of suitability of use
H	<p>Describe, interpret and create <b>entity relationship diagrams, state transition diagrams,</b> data flow diagrams and flowcharts, and for each explain its suitability for use in a given application.</p>	<p>Describe, interpret and create data flow diagrams and flowcharts, and for each explain its suitability for use in a given application.</p>	Removed state transition. ERD moved to AS.



### 3.3.2 Designing computer-based information systems

Ref	Old	New	Comment
A	<b>Discuss</b> batch, interactive and real-time processing systems in terms of processing methods, response time and user interface requirements;	<b>Compare</b> batch, interactive and real-time processing systems in terms of processing methods, response time and user interface requirements;	Keyword, discuss changed to compare
C	<b>Discuss</b> the use of colour, layout, quantity of information on screen, size of font, complexity of language and type of controls when designing a human-computer interface	<b>Explain</b> the use of colour, layout, quantity of information on screen, size of font, complexity of language and type of controls when designing a human-computer interface	Keyword discuss changed to explain
D	<b>Discuss different methods of dialogue that allow interaction between computer and person, person and computer and computer and computer;</b>		This has been removed.
D	<b>Discuss</b> the concept and implication of good methods of human-device communications, particularly human-computer interfaces (HCI) using command line interfaces, menus/submenus, graphical user interfaces (GUIs), natural languages (including speech input-output) and forms dialogue;	<b>Explain</b> the concept and implication of good methods of human-device communications, particularly human-computer interfaces (HCI) using command line interfaces, menus/submenus, graphical user interfaces (GUIs), natural languages (including speech input-output) and forms dialogue;	Old bullet point E Keyword discuss changed to explain
G	<b>Discuss</b> the importance of designing a system model that matches closely the user's mental model;	Explain the importance of designing a system model that matches closely the user's mental model;	Old bullet point H. Keyword discuss changed to explain

### 3.3.3 Networks and communications

Ref	Old	New	Comment
B	<b>Discuss</b> the characteristics and purpose of intranets, the internet and extranets;	<b>Compare</b> the characteristics and purpose of intranets, the internet and extranets;	Keyword, discuss changed to compare
D	Explain the importance of bandwidth when transmitting data and how different types of communication media (cables, wireless, optical) govern the bandwidth available (knowledge of examples of different communication media is expected);	Explain the importance of bandwidth when transmitting data and <b>analyse</b> how different types of communication media (cables, wireless, optical) govern the bandwidth available (knowledge of examples of different communication media is expected);	Addition of analyse
E	Compare the role of the following network components: switches, hubs, wireless access points, network interface cards, wireless network interface cards, routers, repeaters, <b>bridges</b> and servers (file, applications, mail, proxy, print, backup) and <b>identify</b> where their use would be appropriate;	Compare the role of the following network components: switches, hubs, wireless access points, network interface cards, wireless network interface cards, routers, repeaters, <b>gateways, firewalls</b> and servers (file, applications, mail, proxy, print, backup) and <b>justify</b> where their use would be appropriate;	Added and removed components and changed requirement from identify to justify use
I		<b>Discuss the use and implications of social networking</b>	New bullet point
J	Compare different types of broadband connection and <b>give</b> suitable situations where the use of each would be appropriate: asymmetric digital subscriber line (ADSL), cable, wireless, leased line, satellite;	Compare different types of broadband connection and <b>analyse</b> suitable situations where the use of each would be appropriate: asymmetric digital subscriber line (ADSL), cable, wireless, leased line, satellite;	Old bullet i. Changed requirement from give to analyse
M		<b>Describe how mobile technology and networks can enable communication from anywhere in the world</b>	New bullet point
N	Discuss the implications of being able to communicate from anywhere in the world using mobile technology;	Discuss the implications of being able to communicate from anywhere in the world using mobile technology <b>and networks</b>	Old bullet point L Addition of networks at end

### 3.3.4 Applications of ICT

Ref	Old	New	Comment
	<b>Describe the use of telecommunication and information technology in telephone systems, banking, production control, global positioning systems, navigation and weather forecasting;</b>		Old bullet point A.  Bullet point has been removed
A	<b>Discuss the use of software-based training methods;</b>	<b>Describe the advantages and disadvantages of the following software-based training methods: online tutorials, computer-based training, video conferencing</b>	Old bullet point B  Rewritten to include methods to cover.
B	<b>Explain</b> the limitations of using ICT in society today and how advances in technology may overcome some of those limitations;	<b>Discuss</b> the limitations of using ICT in society today and how advances in technology may overcome some of those limitations;	Old bullet point C.  Keyword changed.
D	<b>Explain</b> how databases may be stored in more than one physical location and how distribution may be carried out using <b>different</b> approaches: partitioned between sites (vertical and horizontal), entire databases duplicated at each site, central database with remote local indexes;	<b>Describe</b> how <b>distributed</b> database <b>systems</b> may be stored in more than one physical location <b>using the following</b> approaches: partitioned between sites (vertical and horizontal), entire databases duplicated at each site, central database with remote local indexes;	Old bullet point E.  Key word changed and meaning clarified.
F	Explain security issues of distributed databases: interception of data, physical access to data, consistency and integrity of data and <b>describe</b> methods of overcoming these issues;	Explain security issues of distributed databases: interception of data, physical access to data, consistency and integrity of data and <b>analyse</b> methods of overcoming these issues;	Old bullet point G  Key word changed.
G	<b>Explain what is meant by an expert system and describe its components and applications;</b>	<b>Describe the components of an expert system (user interface, inference engine, knowledge base) and explain the advantages and disadvantages for a given</b>	Old bullet point H  Sill expert systems but clarified

		<b>application.</b>	requirements
H	<b>Describe how the following ICT tools can be used to assist decision making: management information systems (MIS) and expert systems;</b>	<b>Describe the features of an effective management information system (MI) and explain the advantages and disadvantages of its use.</b>	Old bullet point I  Reworded completed to clarify.
I		<b>Describe how MIS and expert systems can be used by organisations.</b>	New bullet point – reworded old I.
K		<b>Discuss the range of services offered by mobile communication services and the impact of these services on individuals and organisations.</b>	New bullet point
L	Describe the internal resources of a <b>system:</b> human, technological and accommodation;	Describe the internal resources of <b>an organisation:</b> human, technological and accommodation;	Old bullet point K, clarified to be of an organisation not a system
	<b>Explain the importance of ensuring that information is exchanged accurately and in a timely manner within an organisation and describe how this is achieved;</b>		Old bullet point L, removed.
	<b>Describe the characteristics of the following systems: personnel, finance and stock control.</b>		Old bullet point M, moved to AS.

### 3.3.5 Implementing computer-based information systems

Ref	Old	New	Comment
A	<b>Describe</b> the involvement of the client when a custom-written computer-based information system is to be produced, from the initial meeting with the client to the installation of the system;	<b>Explain</b> the involvement of the client when a custom-written computer-based information system is to be produced, from the initial meeting with the client to the installation of the system;	Key word has changed from describe to explain

### 3.3.6 Implications of ICT

<b>Ref</b>	<b>Old</b>	<b>New</b>	<b>Comment</b>
B	<b>Describe</b> change management and factors that must be considered (staff capability, staff views, systems, equipment and accommodation) when managing change;	<b>Discuss</b> change management and factors that must be considered (staff capability, staff views, systems, equipment and accommodation) when managing change;	Key word has changed from describe to discuss
	<b>Describe the purpose and activities of professional bodies, eg BCS;</b>		Old bullet E  Has been moved to AS
	<b>Explain the advantages and disadvantages of belonging to a professional body;</b>		Old bullet F  Has been moved to AS