

# 2001 (Summer) GCE Information Technology ICT2

(Post QPEC Post-standardising)

**Unless indicated otherwise**

**each bullet point is worth one mark  
/ denotes an alternative word or phrase**

- 1** Topic 11.5 – Manipulation and/or processing  
NB QUESTION IS **STATE**

- Date
- Sound
- Picture/video/bitmap/graphics/images
- Binary code/Program
- Boolean
- Real Numbers/integers/BCD/Numeric – used for arithmetic/currency

**Max 2**

**2**

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- 2** Topic 11.3 – Organisation of Data for effective retrieval

- Independence of data
- Less (allow no) redundant data/less duplicated data
- Consistency of data
- Improved quality of management information
- "Single input" principle/updating less time consuming
- Increased productivity as ad hoc reports can be generated to meet particular needs/relationships between tables allow extraction of linked information
- Allows different access rights for different parts of database

**Max 4**

**4**

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3	<p>Topics      11.4 - Software; nature capabilities and limitations (a)  11.7 - Hardware; nature, capabilities and limitations (b)  11.10 – Human Computer Interface (c)</p>	
	<p>(a)</p> <ul style="list-style-type: none"> <li>• Provides interface/communication between the operating system/computer/application package and the printer</li> <li>• <u>Translates</u> formatting and highlighting information into a form that the printer can understand</li> <li>• Stores page set-up/configuration</li> <li>• Translates fonts, bit maps and size control</li> <li>• Error messaging e.g. paper out, ink low etc.</li> </ul> <p><b>Any 2 x 1</b></p>	2
	<p>(b)</p> <ul style="list-style-type: none"> <li>• Sound files too large to go on floppy disk.</li> </ul>	1
	<p>(c)</p> <ul style="list-style-type: none"> <li>• audible error messages</li> <li>• audible instructions for the user</li> <li>• audible progress reports on printing.</li> </ul> <p><b>Any 1 x 1</b></p>	<p><u>1</u> 4</p>
4	<p>Topic 11.10 – Human Computer Interface</p>	
	<p>(a)    <b><u>STATE</u></b></p> <ul style="list-style-type: none"> <li>• Windows/dialogue boxes</li> <li>• Icons/Buttons</li> <li>• Menus/Pull down /Pop up menus</li> <li>• Pointers/Mice</li> </ul> <p>NOT WIMP by itself</p> <p><b>Max 4</b></p>	4
	<p>(b)    <b><u>DESCRIBE</u></b></p> <p><b>Information displayed on screen will be reproduced exactly on a printer - NO CREDIT</b></p> <ul style="list-style-type: none"> <li>• this includes font types/style, font sizes bold, italics, underscore, superscript (1 mark 2 effects, 2 marks 3 effects)</li> <li>• no need for colour or special symbols(1) to represent these effects(1)</li> <li>• Possible to see and manipulate the eventual layout(1) on the screen more easily (1)</li> <li>• improved productivity/(allow saves time if qualified) (1) because /fewer drafts/less switching to print preview (1)</li> <li>• easier formatting/manipulation (1) of objects /e.g. image, clipart, tables (<i>NB no marks just for importing or mentioning objects</i>)(1)</li> </ul> <p>NOT Grammar and Spelling</p> <p><b>Any 3 x (2, 1, 0)</b></p>	<p><u>6</u> 10</p>

5	Topic	11.8 - Security of Data (a)
		11.4 - Capabilities of Software (b)
		11.6

(a)

- Security Procedures e.g. not leaving terminals logged on/ password security
- Staffing issues vetting/training/dismissal
- Backup procedures
- Use of encryption
- Virus checking
- Levels of permitted access
- Use of passwords
- Use of software to monitor all terminal activity

**Any 3 x 1**

**3**

(b) (i)

- Automation of presentation/timing/ Availability of transitions between slides
- Use of video/animation/sound to improve impact
- Ease of editing presentation/ability to change or update information instantly
- Importing of live information from other packages
- Pack and go/creation of stand-alone presentations

**Any 3 x 1**

**3**

(b) (ii)

- Font sizes for text (1) appropriate to venue/audience etc (1)
- Use of style/colour/material (1) appropriate to intended audience (1)
- Application of Company' Standards (1) e.g. layout, logos etc. (1)
- Adoption of clear layout principles/Avoidance of information overload (1) in order to impart information effectively(1)
- Use of good quality Images/Animation/Sound (1) to emphasise information/as poor quality items will distract audience (1)

**Any 2 x (2,1,0)**

**4**

**10**

6 11.4 - Nature and types of Software/Capabilities of Software

(a)

- Manages all the other programs in a computer
- Manages user communication with the computer
- Handles input/output from attached hardware devices/peripheral control
- Resource allocation and scheduling
- Memory management
- Backing Store management
- Management of multitasking
- Interrupt handling
- Boot/reboot/boot-strap/loading user interface

**Any 3 x 1**

**3**

(b)

- An applications package
- That is appropriate to many areas
- Of day to day business operations/allow suitable examples (must have more than one)
- Word-processors/DTP (1), spreadsheets (1), database management systems (1), Integrated package (1) *maximum of three packages*

**MAX 6 Marks**

**6**

(c)

- Allows the user to specify the interface required
- The functions required
- Then automatically generates the code
- To produce the customised application

**MAX 2 Marks**

**2**

**11**

7 Topic 11.3 - Organisation of data for effective retrieval (a)  
11.2 - Verification and Validation (b)

(a)

- Number of tickets
- Venue of festival
- Name of Festival
- Date of festival
- Type of ticket
- Price of ticket
- Method of Payment
- Date of Birth
- Telephone number
- E-mail address
- Credit/Debit/Switch card number/details
- Allow marketing issues

**Any 3 x 1**

**3**

(b)

- (**Number of tickets**) Range check/Format check/Presence check/Type check (1) and description (1)
- (**Venue**) Format check/Presence check/Look-up list (1) and description (1)
- (**Date**) Format check/Presence check/Range Check/Cross field check with venue/lookup (1) and description (1)
- (**Type**) Format check/Look-up list (1) and description (1)
- (**Price**) Type check/Range check/Look-up list/Cross field check (1) and description (1)
- (**Method**) look-up list (1) and description (1)
- (**Telephone number**) Format Check (1) and description (1)
- (**E-mail Address**) Format Check (1) and description (1)
- (**Card**) Format Check/Check digit/ (1) and description (1)
- (**Marketing**) an appropriate check (1) and description

NB if fields not mentioned take checks in same order as part (a)

**Any 3 x (2, 1, 0)**

**6**

**9**

8 Topic 11.9 - Network Environments

(a)

- Data/information can be shared without need for duplication
- Software can be shared
- Data transfer is improved
- Communications are improved/Team-working is more effective
- Centralised upgrading/installation of software
- Improved sharing of peripherals e.g. printers
- Central control of security
- Central control of backup

**Any 3 x 1**

**3**

(b)

- Central pool of data/printer available to all employees
- Central control of security (if not given in (a))
- Central control of backup (if not given in (a))
- Centralised upgrading/installation of software (if not given in (a))
- Dedicated servers usually provide faster access to network resources
- Users are freed from network management tasks
- Computers may be of different types

**Any 2 x 1**

**2**

(c)

- Server (1) plus reason (1)
- Network Interface cards (1) plus reason (1)
- Transmission media/cabling (1) plus reason (1)
- Hub/switch (1) plus reason (1)
- Modem/Terminal adapter (1) plus reason (1)

**Any 2 x (2, 1, 0)**

**4**

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**9**

9 Topic 11.1 - Data Capture and 11.7 - Hardware; nature, capabilities and limitations

(a) (i)

- typed text and handwriting needs to be clear (1) otherwise conversion to characters may not take place/*allow good example* (1)
- Damaged/creased folded documents (1) affects accuracy of results (1)
- results are not always accurate (1) so the imported text needs to be proof-read/spell-checked (1)
- layout/formatting of page lost (1) copies not in same format as original (1)

**Any 2 x (2, 1, 0)**

**4**

(a) (ii)

- Scanning a document is faster than typing it (1) reduction in staff time required/for non-touch typists (1)
- Not using keyboard (1) reduction in RSI(1)
- text to be stored in a form that can be edited (1) allows updating of previously produced documents without completely retyping them (1)
- scanning of documents can be performed by non-typists (1) allows use of non-specialist staff (1)
- OCR document is smaller in size (1) files size is reduced (1)

**Any 2 x (2, 1, 0)**

**4**

(b)

- Maps
- Plans
- OMR documents
- Tables of data
- Charts/diagrams
- Pictures/Photographs
- Music
- Archive documents
- Signatures

**Any 3**

**3**

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**11**