Cambridge National in IT: R050 IT in the digital world
Revision Checklist

Topic Area 1: Design tools				
Spec point	**Content (what you need to know)**	**Revised once**	**Revised twice**	**Got it!**
1.1 Types of design tools	Flow charts (components, advantages/disadvantages)	☐	☐	☐
	Mind maps (types – Library, Tunnel timeline, Presentation; advantages/disadvantages)	☐	☐	☐
	Visualisation diagrams (components, advantages/ disadvantages)	☐	☐	☐
	Wireframes (components, advantages/ disadvantages)	☐	☐	☐

Topic Area 2: Human Computer Interface (HCI) in everyday life				
Spec point	**Content (what you need to know)**	**Revised once**	**Revised twice**	**Got it!**
2.1 The purpose, importance and use of HCI in application areas	The purpose of HCI	☐	☐	☐
	Why & how HCI is used for each application area: • Banking • Embedded systems • Entertainment • Fitness • Home appliances • Retail	☐	☐	☐
2.2 Hardware considerations	The different display types and sizes that an HCI can be used on	☐	☐	☐
	The impact of display and resources on the HCI (memory, processing power)	☐	☐	☐
	Advantages and disadvantages of hardware considerations for using an HCI	☐	☐	☐
2.3 Software considerations	Operating systems	☐	☐	☐
	Digital platform: Database; Mobile App; Spreadsheet; Website	☐	☐	☐
2.4 User interaction methods	Gesture; Keyboard; Mouse; Touch; Voice	☐	☐	☐
	Advantages and disadvantages of each user interaction method	☐	☐	☐

Topic Area 3: Data and testing				
Spec point	**Content (what you need to know)**	**Revised once**	**Revised twice**	**Got it!**
3.1 Information and data	What data is	☐	☐	☐
	What information is	☐	☐	☐
	The relationship between data and information	☐	☐	☐
3.2.1 Use of data types in different contexts	Characteristics of each data type: Alphanumeric; Boolean; Date; Numeric; Currency; Decimal; Integer; Percentages; Real; Text	☐	☐	☐
	How each data type can be used	☐	☐	☐
	Assess the suitability and justify the use of data types applied to a given context	☐	☐	☐
3.2.2 The difference between validation and verification	The purposes and different roles of validation and verification	☐	☐	☐
3.2.3 Data validation tools	The purpose of these data validation tools: • Data type check • Format check • Input mask • Length check • Limited choice: Drop down list; Radio buttons; Tick list • Lookup • Presence check • Range check	☐	☐	☐
3.2.4 Data verification tools	How verification tools can reduce user errors: • Double entry • Manual checking	☐	☐	☐
3.3 Data collection methods	Primary: Email; Interview; Online Questionnaire and survey	☐	☐	☐
	Secondary: Book; Government Statistics; Magazine; Website	☐	☐	☐
3.4 Storage of collected data	Logical location (cloud) – advantages and disadvantages	☐	☐	☐
	Physical location – Internal and external devices	☐	☐	☐
	Internal storage device: primary hard drive; network drive	☐	☐	☐
	External storage device: Portable external Hard Drive Disc (HDD); Portable Solid-State Drive (SSD); Network-attached storage (NAS) device; Portable USB Flash Drives; Portable Wireless Drives	☐	☐	☐
3.5 Application of testing to a range of contexts	Importance and purpose of testing	☐	☐	☐
	Test data – extreme, invalid (Erroneous), valid	☐	☐	☐
	Types of testing – technical, user	☐	☐	☐

Topic Area 4: Cyber-security and legislation				
Spec point	**Content (what you need to know)**	**Revised once**	**Revised twice**	**Got it!**
4.1 Threats	Denial of service (DoS)	☐	☐	☐
	Hacking including: Black Hat, Grey Hat, White Hat	☐	☐	☐
	Malware including: Adware, Botnet, Ransomware, Spyware, Trojan Horse, Virus, Worm	☐	☐	☐
	Social Engineering including: Baiting, Phishing, Pretexting, Quid Pro Quo, Scareware, Shoulder Surfing	☐	☐	☐
	Why each threat is used by attackers and how it works	☐	☐	☐
	How to mitigate against the threats	☐	☐	☐
4.2 The impacts of a cyber-security attack on individuals and/or organisations	Data destruction	☐	☐	☐
	Data manipulation	☐	☐	☐
	Data modification	☐	☐	☐
	Data theft – in transit and at rest	☐	☐	☐
	Denial of service (DoS) to authorised others	☐	☐	☐
	Identify theft	☐	☐	☐
4.3 Prevention Measures	Physical: Biometric devices, Firewalls, Keypads, Radio-frequency identification (RFID), Secure backups	☐	☐	☐
	Logical: Access rights and permissions, Anti-virus / malware software, Two-Factor Authentication (2FA), Encryption, Firewalls, Secure backups, Usernames & passwords	☐	☐	☐
	Secure Destruction of data: Data erasure, Data sanitation, Magnetic wipe, Physical destruction	☐	☐	☐
4.4 Legislation related to the use of IT systems	Computer Misuse Act	☐	☐	☐
	Copyright, Designs and Patents Act	☐	☐	☐
	Data Protection Act	☐	☐	☐
	Freedom of Information Act	☐	☐	☐
	Health & Safety at Work Act	☐	☐	☐

Topic Area 5: Digital communications				
Spec point	**Content (what you need to know)**	**Revised once**	**Revised twice**	**Got it!**
5.1 Types	the purpose of each digital communication: • Audio • Collaboration tools • Leaflet • Infographics • Newsletters • Presentations • Reports • Social Media • Video • Voice over Internet Protocol (VoIP) • Websites	☐	☐	☐
	Advantages and disadvantages of each digital communication	☐	☐	☐
5.2 Software	Desktop Publishing (DTP)	☐	☐	☐
	Standard office applications	☐	☐	☐
	The characteristics of the software used to create digital communications	☐	☐	☐
5.3 Digital devices	The characteristics of the digital device: • Smartphone • Smart TV • PC/Laptop • Tablet • Smartboard	☐	☐	☐
5.4 Distribution channels	Types of distribution channel: Cloud, Email, Messaging, Mobile Apps, Multimedia, VoIP, Websites	☐	☐	☐
	Distribution channel connectivity: 4G / 5G, Bluetooth, Mobile Wi-Fi hotspots, Wi-Fi, Wired	☐	☐	☐
5.5 Audience demographics	Select and assess the suitability of the digital communication, distribution channel and connectivity linked to specific audience demographic: • Accessibility • Age • Gender • Location	☐	☐	☐

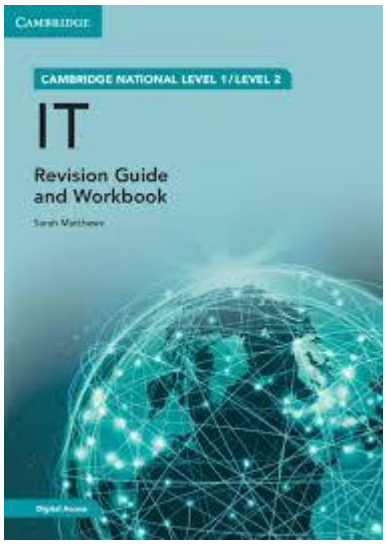
Topic Area 6: Internet of Everything (IoE)				
Spec point	**Content (what you need to know)**	**Revised once**	**Revised twice**	**Got it!**
6.1 Use of IoE	What is the IoE	☐	☐	☐
	The four pillars of the IoE	☐	☐	☐
	The interactivity between the four pillars	☐	☐	☐
	IoE digital interactivity: • Device to device • Human to device • How digital devices can be tailored to meet the needs of the user	☐	☐	☐
6.2 Application areas in everyday life	The purpose of the IoE applied to each application area: Energy Management, Health, Manufacturing, Military / Emergency Services, Smart devices (Business, Home, Personal), Transport	☐	☐	☐
	Advantages and disadvantages of the IoE applied to each application area	☐	☐	☐
	The security issues related to the use of the IoE in each application area	☐	☐	☐

eRevision checklist – topics revised at erevision.uk

Spec point	**One activity completed**	**Two or more completed**	**All activities completed**
Topic Area 1: Design tools			
1.1 Types of design tools	☐	☐	☐
Topic Area 2: Human Computer Interface in everyday life			
2.1 The purpose, importance, and use of HCI in application areas	☐	☐	☐
2.2 Hardware considerations	☐	☐	☐
2.3 Software considerations	☐	☐	☐
2.4 User interaction methods	☐	☐	☐
Topic Area 3: Data and testing			
Information and data (3.1) and use of data (3.2.1)	☐	☐	☐
Validation and verification (3.2.2–4)	☐	☐	☐
Data collection methods (3.3) and storage of collected data (3.4)	☐	☐	☐
3.5 Application of testing to a range of contexts	☐	☐	☐
Topic Area 4: Cyber-security and legislation			
4.1 Threats	☐	☐	☐
The impacts of a cyber-security attack (4.2) and prevention measures (4.3)	☐	☐	☐
4.4 Legislation related to the use of IT systems	☐	☐	☐
Topic Area 5: Digital communications			
5.1 Types of digital communication	☐	☐	☐
Software (5.2) and digital devices (5.3)	☐	☐	☐
Distribution channels (5.4) and audience demographics (5.5)	☐	☐	☐
Topic Area 6: Internet of Everything (IoE)			
6.1 Use of IoE	☐	☐	☐

6.2 Application of IoE in everyday life	☐	☐	☐

Revision Guide Information: Students have all been provided with a copy of the revision guide below.



Useful Websites:

https://quizlet.com/gb/878045404/it-r050-exam-revision-flash-cards/

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https://erevision.uk/

OCR Exam Board Information

Click here to read the OCR Specification 'at a glance'

The full specification can be downloaded from this page if required

Command Words Used in the Exam

External assessment

The table below shows the command words that will be used in exam questions. They show what we mean by the command word and how students should approach the question and understand its demand. Remember that the rest of the wording in the question is also important.

Word(s)	Students will....
Analyse	• Separate or break down information into parts and identify their characteristics or elements • Explain the pros and cons of a topic or argument and make reasoned comments • Explain the impacts of actions using a logical chain of reasoning
Annotate	• Add information, for example, to a table, diagram or graph until it is final • Add all the needed or appropriate parts
Calculate	• Get a numerical answer showing how it has been worked out
Choose	• Select an answer from options given
Circle	• Select an answer from options given
Compare and contrast	• Give an account of the similarities and differences between two or more items or situations
Complete	• Add all the needed or appropriate parts • Add information, for example, to a table, diagram or graph until it is final
Create	• Produce a visual solution to a problem (for example: a mind map, flowchart or visualisation)
Describe	• Give an account including all the relevant characteristics, qualities or events • Give a detailed account of
Discuss	• Present, analyse and evaluate relevant points (for example, for/against an argument)
Draw	• Produce a picture or diagram
Evaluate	• Make a reasoned qualitative judgement considering different factors and using available knowledge/experience
Explain	• Give reasons for and/or causes of • Use the words or phrases such as 'because' or 'therefore' or 'this means that' in answers
Fill in	• Add all the needed or appropriate parts • Add information, for example, to a table, diagram or graph until it is final
Identify	• Select an answer from options given • Recognise, name or provide factors or features
Justify	• Give good reasons for offering an opinion or reaching a conclusion
Label	• Add information, for example, to a table, diagram or graph until it is final • Add all the necessary or appropriate parts
Outline	• Give a short account, summary or description
State	• Give factors or features • Give short, factual answers

Cambridge Nationals in IT Homework Schedule 2025

Week Beginning	Homework
Spring Term	
06 Jan	Closed due to weather
13 Jan	Design tools (revision)
20 Jan	Human Computer Interface (revision)
27 Jan	IT in the digital world (revision)
03 Feb	Data and testing (revision)
10 Feb	IT in the digital world(revision)
Friday 14th February - R070 Deadline – To be handed in Assignments will be marked, improvements to be made after school	
Spring Half Term Holiday 17-21 Feb	
24 Feb	Storage and collection of data
03 Mar	Testing
10 Mar	Cyber security and legislation
17 Mar	IT in the digital world
24 Mar	Digital communications
31 Mar	IT in the digital world
Summer Term	
21 Apr (Bank Holiday)	Internet of Everything
28 Apr	Revision
05 May (Bank Holiday)	Revision
12 May	Revision
19 May	IT R050 Exam PM / 1hr 30 min
Summer Half Term Holiday 26-30 May	