OCR
Oxford Cambridge and RSA

Cambridge National

ICT

Unit **R001/01:** Understanding Computer Systems

Level 1/2 Cambridge National Certificate/Award/Diploma in ICT

Mark Scheme for June 2015

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

1	BOD	BOD	Benefit of doubt
2	✖	Cross	Cross/Incorrect
4	SEEN	SEEN	Noted but no credit given
5	✔	Tick	Tick
6	TV	TV	Too vague
7	NBOD	NBOD	Benefit of doubt not given
8	L1		Level 1
9	L2		Level 2
10	L3		Level 3
11	BP		Blank page
12	?		DO NOT use

Question			Answer/Indicative content	Mark	Guidance
1	a		Up to THREE marks: **Monitor** — To view images as they are being created **Printer** — To create a hardcopy of a frame from a cartoon **Speaker** — To listen to sound files	3	
	b	i	Microphone	1	Accept abbreviations, such as MIC/mike
		ii	Up to TWO marks for EACH of two ways: E.g. - Trim off the end/delete a section (1) that is not needed / to reduce the length (1) - The volume could be changed (1) to make it quieter/louder/by editing the sound levels (1) - Effects could be added (1) such as an echo/so that the sound is more dramatic (1) - Add background music (1) by adding another track (1) - Change the pitch (1) to make it sound higher/lower(1)	4	May only award expansion where the way had been given Candidate may earn the second part of the mark by explaining WHY the method has been done or HOW the method was done. ONLY award marks for changes to the sound file and not the use of software/hardware. IGNORE any discussion of hardware or software

Question			Answer/Indicative content	Mark	Guidance
2	a		Up to TWO marks: E.g. - Specialist tools (may identify) (award once only) (1) - Can reuse old work (1) - Work can be saved on a computer (1) - May use less paper/less waste (1) - Does not need to be scanned (1) - Mistakes can be easily removed (1)	2	DO NOT accept "easier" or "quicker" or "saves time" unless it is clearly related to editing, or duplication/copy and paste – it is not necessarily quicker or easier to draw using software. More accurate may only be accepted where there is an appropriate and clearly correct expansion. E.g. It would be quicker than scanning each piece of paper 0 marks It would be easier <u>to edit (1)</u> "It's quicker and easier" – treat as two answers and mark both as being incorrect. DO NOT award repetition by reversal E.g. Software is editable, hand drawn is not (1 mark) DO NOT accept answers to do with cost or purchase
	b		ONE mark: E.g. - Mouse not accurate as a pen (1) - Training may be required in the use of software (1) - Software can crash/delete/corrupt (1)	1	Answer may refer to disadvantage of using software, or advantage of using pen and paper. Assume software, pen and paper are all available DO NOT accept answers to do with cost or purchase.

Question			Answer/Indicative content	Mark	Guidance

	c		Up to THREE marks:
			
			E.g.
			  • Keep on removable medium and lock away (1)
			  • Password (access to network) (1)
			  • (Restrict) access <u>rights</u> (to the folder) (1)
			  • Store file in a hidden folder (1)
			  • Firewall (1)
			  • Locked door (1)
			  • Security guard (1)
			  • Use a VPN/secure network (1)
				3	DO NOT accept "user logons".
					
					Do not accept answers to do with access to file e.g. encryption or formatting E.g. watermarking. The question asks for methods to protect from **THEFT**.
					
					Award ONE mark for "password" on its own.

3	a		Up to SIX marks:
			
			E.g.
			  • Use online storage (may give example) (1) and share access (1)
			  • Email (1) with an attachment/the message can be included in the body(1)
			  • They can use telephone/voice chat (1) to have a discussion/discuss (1)
			  • They can discuss and share images (1) via a Video Conference/Skype/Face time or equivalent(1)
			  • They can write short messages (1) via text message (1)
			  • Instant message (or other suitable app) (1) can be used to send drawings(1)
				6	Award marks for method (1) plus description of what is shared (1) MAX two per method.
					
					DO NOT accept "send electronically"
					DO NOT accept "post"/courier due to time constraints
					
					Accept answers to do with social media only where it is CLEAR that this is a private conversation.
					Assume internet access is available to both Ali and Catherine

Question			Answer/Indicative content	Mark	Guidance
	b		Up to FOUR marks: E.g. • File size (1) with a small file size can be sent quickly over most systems/may exceed the maximum allowed by the email system (1) • Security (1) system may be prone to hacking/less secure so avoid/file is critical so use a secure method (1) • Bandwidth (1) a large file will take a long time to send if the bandwidth is low (1) • Time (1) work must be completed by deadline(1) • Cost (1) some methods are more expensive than others (1) • Aware of delivery (1) Catherine needs to know that the file has arrived (1) • Ability to send text and graphics in a file (1) as both need to be included(1).	4	Answer MAY be about the decision to send electronically OR about the choice of which electronic method to use to send. First mark for identifying a factor, second mark for the expansion MAX two marks per factor DO NOT accept location/lost Candidate may identify factor via a reason why would NOT use a method. Assume internet access is available to both Ali and Catherine
	c		Up to THREE marks: E.g. • Columns for start time and finish time/times(1) • Rows/sheets for each day of the week (1) • Format cells to accept time (1) • Enter hours into spreadsheet (or equivalent) (1) • Use a formula (or e.g.) (1) • Take start time from finish time (NOT calculate/work out hours) (1) • Convert to decimal (1) • Add together (1)	3	Maximum 2 marks without a clear description of calculating **hours worked** (NOT wage) (E.g.. Add together all hours worked)

Question			Answer/Indicative content	Marks	Guidance	
					Content	**Levels of response**
4			Candidates may consider: **Animated World Books** *Positive* • The positive image (wow factor) to be gained from using an app for this purpose • App can go viral • Range of resources that can be included on an app *Negative* • Specialist software required to create the app. • Cost to develop the app • Cost and time to maintain the app **Customer** *Positive* • Download use the app anytime, anywhere • Unlimited use • Links to bonus features • Free to get the app *Negative* • Need for a smart phone or other device to view the app • The time taken to download an app • Need for wifi/3g connection • The storage space required for an app	7 - 8 4 – 6	**Detailed and well-developed example** The use of apps will make AWB look more high tech and imaginative because Apps are an inventive way of advertising and are at the forefront of technology and so this will impress customers and others because in the specific industry they are in, there are not many people using such techniques in this way. **A good description** The customer will be able to download the app at any time by going to the app store. **Identify** Any item from the indicative content list **Weak description** The apps need to be downloaded	**LEVEL Three (7–8 marks)** For the top of the band, candidates will provide a detailed and well-developed discussion **which answers the question** by describing implications with a clear explanation of why each is important. The answer must include at least one implication to **Animated World Books** and at least one implication to **customers**. All answers must be in context. Specialist terms will be used correctly and appropriately. **Level 2 (4–6 marks)** For the top of the band, candidates will provide a detailed and well developed discussion of **ONE** implication, with a clear explanation of why it is important. OR candidates will provide a good description of implications. Each factor will be described with no indication of why it is important. Answer may NOT consider both AWB and customers At the bottom of the mark band, candidate

Question			Answer/Indicative content	Marks	Guidance	
					Content	**Levels of response**
				1 – 3		will provide a description of ONE factor, which may not be in context. . Specialist terms will be used appropriately and for the most part correctly. **Level 1 (1–3 marks)** The answer may be a list of implications, or a very weak description of one implication. There will be no use of specialist terms. At the bottom end, simply identifying one implication is worth 1 mark. **Zero marks** Answers with no valid content.
				0		

Question			Answer/Indicative content	Marks	Guidance
			SECTION B		
5	a		ONE mark available: E.g. • Keyboard (1) • Touch screen (1)	1	Make sure it is an input device, not software device. Accept equivalent answers.
	b		Up to TWO marks: E.g. • Verification/ to make sure/confirm (1) that the **correct** email address is entered (1) • The two are compared (1) to identify mistakes (1) • You may make a mistake with the first one (1) and the difference will highlight this (1) • To make sure (1) that they did not enter it incorrectly the first time(1)	2	Must be ONE coherent answer for full marks IN THIS case, we have accepted that the need for double entry is so that the email is useable, therefore is VALID.
	c		Up to FOUR marks: E.g. • Put instructions on the form/alert (1) so that data is entered in the correct format (1) • The form can be set up to only accept the correct type of data (1) so that the data collected fits what is needed (1) • Drop down lists (1) tick boxes can be used (1) so that user can only select from an expected list (1) • A validation check can be used/run a coding procedure (1) to make sure the correct type of data is entered (1) • Radio buttons (1) so that can only choose one (1) from a list (1) • Questions on the form (1) must only be relevant (1) to what is being saved (1)	4	Read the whole answer and mark to the candidate's best advantage. A generic description of validation is acceptable for 1 mark MAX two if answer is only a list of features. NOT two plus two (may award answer for one well developed answer making a range of valid points)

Question			Answer/Indicative content	Marks	Guidance
	d		Up to THREE marks: E.g. • Customers may receive unwanted emails (or example) (1) • Customers' bank accounts may be accessed/their money may be stolen (1) • Identity theft or implication thereof (such as – "change bank account") (1) • Their other accounts may be hacked (1) • Other people will see your data (1)	3	Answer MUST be an implication to the customer and not a statement of what would happen if the data is not secure. Must be a direct possible implication of data loss and not a secondary action required/expected of the customer No marks for "This is against the DPA" (this is not an implication <u>on its own</u>). Acceptable implications include: • Issues to do with customers' time/inconvenience • Issues to do with credit rating • Implications to do with data being lost/deleted
	e		TWO marks: E.g. • Customers will not trust him/lose faith in him/negative effect on reputation (1) • Customers would not buy from him (1) • He may need to pay compensation (1) • He may have legal implication (or example thereof) (1) • He will not be able to fulfil orders/he will lose sales (1) • He will not be able to issue invoices/track payments (1)	2	DO NOT award "he will lose money" without the reason.

Question			Answer/Indicative content	Marks	Guidance
6	a		Up to FOUR marks for two matched answers: E.g. • The file size may be large (1) and he will not need extra capacity to store it/it will not affect the speed of his website/he will not need the bandwidth to deliver it (1) • Web requests will go to another website (1) and so his website will not be affected (1) • It's a cheaper way of allowing others to see his work (1) as he will not need increased storage capacity (1) • More people can see the image (1) because more people use social media (1) • Other people do the advertising (for you) (1) by sharing the image/liking the image (or equivalent) (1) • Social media can have groups (1) and make recommendations to that group (1) • Social media is pushed directly to you (1) whereas a websites you have to find (1) • Images can go viral (1) so more people will see them quickly (1)	4	Identify an advantage for first mark, expand for second mark. Avoid awarding marks for repeated answers.

Question			Answer/Indicative content	Marks	Guidance
	b		Up to TWO marks: E.g. - He may lose (1) Copyright protection (1) - Illegal activities shown in the image (1) may lead to prosecution (1)	2	One legal issue + one disadvantage to Richard
	c		Up to TWO marks: E.g. - He could use a wifi connection (1) when he gets home/when in a wifi hot spot (1) - Look for available wifi connections (1) choose one (1) and use that (1) MAX 2 marks - Select 4G (1) if available/possible (1)	2	Description of method, not benefit to be gained
	d		Up to TWO marks: E.g. - He has to pay for 3G (1) and so the file transfer may be expensive/the file may be a large one(1) - His 3G account may only be free in his home country (1) and if he is abroad, it could be expensive (1) - He may be at the limit of his data plan (1) and so it would be expensive to upload more (1) 3G connection may be weak (1) plus implication (such as upload may be interrupted) (1) 3G connection may be slower than wifi (1) and the files are big (1)	2	Identify a reason for first mark, expand for second mark. This answer does not need to match answer for Q6c.

Question			Answer/Indicative content	Marks	Guidance
7	a		ONE mark: E.g. • Increase size of icons (1) • Increase font size (1) • Turn down brightness of the screen (1) • Turn up contrast (1) • Change refresh rate on the monitor (1)	1	Must be a change to the operating system, not a physical change.
	b		Up to TWO marks: E.g. • He could take regular breaks (1) of suitable timescale (1) • Use an anti-static cloth (1) to remove dust particles from the screen (1) • Work with soft light (1) so that lights are not reflected off the screen (1) • Regular (1) eye checks (1) • Keep glasses prescription (1) up to date (1) • Increase font size (1) so that it is easier to read (1)	2	**Do not** award same answer from 7a Answers from 7a list are also acceptable (as long as not given for 7a) Answer may be a change to operating system or physical change or work pattern change

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