



# Information and Communication Technology

**-0417-**

**Chapter Ten: Communication**

**0417 Past Paper Questions with Mark Scheme**

**2021-2024**



## Rosary School Marj Alhamam

1 You have been asked by the secretary of a soccer club to create a website to publicise its results, fixtures and other events.

When the website has been created it has to be published on the internet. You plan to upload it onto the internet using FTP.

(a) Explain what is meant by FTP.

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[2]

(b) Explain how to upload and publish the content of a website using FTP.

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[4]

(c) Before the website is published it needs to be tested.

Write down **three** different features of the web pages that could be tested. For each feature, describe the method you would use to carry out the test.

Feature 1.....

Method.....

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Feature 2.....

Method.....

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Feature 3.....

Method.....

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[6]

2 Data stored on a computer system is at risk of being hacked.

(a) Explain what is meant by the term hacking. Include in your answer **two** examples of the effects this can have on the computer system.

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[3]

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**(b) Describe **three** measures that could be taken to protect the data from being hacked.**

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2.....

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[3]

**3 (a) Describe **two** uses of a company intranet.**

1.....

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2.....

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[2]

**(b) Social networking is used to communicate with friends; this is one use of the internet.**

Describe **four** other **uses** of the internet.

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[4]

## Chapter Eight

(c) A major part of the everyday use of the internet is social networking. Currently some social networks are not policed. The owners of a website have full discretion on what material is removed and what is allowed to be kept.

Discuss the benefits and drawbacks of policing social networking sites.

[8]

4 A search engine can be used to find information on the internet.

(a) Describe the disadvantages of using a search engine to find information rather than typing in a web address.

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[4]

(b) A student is writing a project on rare animals. He uses a search engine to find information about the animals from the internet. He is concerned about the reliability of some of the information he has found.

Explain how he would evaluate the reliability of this information.

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[6]

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5 Complete the sentences using the most appropriate item from the list.

blog	cookie	email	fax
search engine	social media	web browser	wiki

(a) A piece of software that allows a user to display a web page is called a

..... [1]

(b) A personal internet journal is called a

..... [1]

(c) A web application that allows a group of people to edit the content is called a

..... [1]

6 An organisation uses the internet and an intranet.

(a) Explain how the purpose of the internet differs from the purpose of an intranet.

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..... [4]

**Chapter Eight**

Employees in the organisation are allowed to access the intranet using their smartphones.

The employees are required to secure their smartphones using either facial recognition, passwords or voice recognition.

(b) Tick (✓) whether the following statements refer to **facial recognition, password or voice recognition**.

	Facial recognition (✓)	Password (✓)	Voice recognition (✓)
This method cannot access the smartphone unintentionally			
The accuracy of this method can be affected by noise			
This method requires the use of the smartphone's camera			
This method could be compromised by shoulder surfing			

[4]

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7 The use of social networking is a part of modern living.

(a) Define the term social networking.

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[2]

(b) Describe the benefits of using social networking.

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[6]

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## 8 Discuss the disadvantages of policing the internet.

[6]

9 The internet has both moderated and unmoderated forums.

Explain what is meant by a moderated forum.

[4]

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10 The internet has both moderated and unmoderated forums.

Explain what is meant by an unmoderated forum.

[4]

11 Many young people now use social media rather than other forms of communication.

Evaluate your own use of social media and explain any eSafety strategies you could use to help minimise the potential dangers.

[6]

12 The World Wide Web (WWW) is often mistaken for the internet.

(a) Explain the differences between the WWW and the internet.

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[4]

(b) The web address for Cambridge IGCSE is:

<https://www.cambridgeinternational.org/IGCSE>

Describe the following parts of the web address.

https:// .....

cambridgeinternational .....

.org .....

/IGCSE .....

[4]

13 Emails are used by people to communicate with each other. Copyright and using acceptable language in the email are two of the constraints that affect the use of email.

(i) Describe **four** other constraints that may affect the use of email.

1 .....

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2 .....

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3 .....

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4 .....

[4]

(ii) Describe **two** rules of the use of acceptable language in emails.

1 .....

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2 .....

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[2]

**14** Uniform Resource Locators (URL) are used to locate websites and resources. A teacher needs to find a teaching guide from Cambridge Assessment International Education. To download the teaching guide she types in:

<https://www.cambridgeinternational.org/igcse-ICT-0417/2193733.pdf>

**(a)** Write down only the part of the URL which shows the file name of the teaching guide.

..... [1]

**(b)** Write down only the part of the URL which is the folder where the teaching guide is stored.

..... [1]

**(c)** Write down only the part of the URL which is the domain name.

..... [1]

**(d)** Explain what is meant by https.

.....  
..... [1]

**15** Spam is associated with ICT systems.

**(a)** Explain what is meant by the term spam.

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.....  
..... [2]

(b) Describe the ways that a user can recognise spam and methods to help prevent it.

[6]

16 Both the internet and the intranet are used for communication.

(a) Define the terms internet and intranet.

**(i) Internet**

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[2]

**(ii) Intranet**

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.....  
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[2]

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(b) The World Wide Web is part of the internet.

Explain why the World Wide Web has become so popular.

[6]

17 A village is built next to a river. During heavy rain the river floods and endangers the people living in the village. If the river is in danger of flooding, an email is sent to all members of the village.

Explain why an email group is used when contacting the villagers.

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[3]

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18 (a) State four characteristics of spam emails.

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[4]

**(b)** Give **two** ways of reducing spam emails.

1 \_\_\_\_\_

2 \_\_\_\_\_

[2]

## 19 Explain why data protection legislation is required.

[4]

20 The features of emails include carbon copy (cc) and blind carbon copy (bcc).

(a) State three other features of emails.

1 .....

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2 .....

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3 .....

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[3]

(b) Describe what is meant by blind carbon copy (bcc).

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[2]

21 A headteacher is sending out emails to her staff.

(a) State what is meant by an email group.

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..... [1]

(b) State what is meant by carbon copy (cc).

.....

..... [1]

(c) State what is meant by an address book.

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..... [1]

(d) State what is meant by blind carbon copy (bcc).

.....

..... [1]

# Mark Scheme

Question	Answer	Marks
1a	<p><b>Two from:</b>          File transfer protocol  <u>Network protocol</u>          Used for transferring files from one computer to another</p>	2
1b	<p><b>Four from:</b>          Download the FTP client program          Connect to the FTP server ...          ... using the FTP client program          Login to the server ...          ... using FTP username and password          Locate the files on your computer          Click upload button on FTP client program          Upload the files to the folder/web hosting space</p>	4
1c	<p>Matched pairs – 1 mark for the feature and 1 mark for the method</p> <p>Hyperlinks          Click each hyperlink to see that it takes the user to the correct web page/part of the web page/website</p> <p>Form buttons/icons          Click to see that they carry out the correct task</p> <p>Text          Use spellchecker/grammar checker/proofread text to check it makes sense</p> <p>Images          Check the images are not pixelated/correct size/correct image</p> <p>Videos          Check the videos run correctly/correct video</p> <p>Sound          Check the sound file runs correctly/correct sound file linked</p>	6

Question	Answer	Marks
2a	<p>Gaining <u>unauthorised</u> access to a computer system – 1 mark</p> <p><b>Two from:</b>  <i>Examples</i>          Can lead to the identity theft of data          Can lead to the misuse of/access to personal data          Data can be deleted          Data can be changed          Data can be corrupted          Place malicious files/software</p>	3
2b	<p><b>Three from:</b></p> <p>Use of firewalls to block unauthorised computer systems          Use of passwords          Use of intrusion detection software/anti-spyware          Use two-factor authentication          Switch off WiFi/computer when not in use</p>	3

Question	Answer	Marks
3a	<p><b>Two from:</b></p> <p>Send/receiving emails          Send/receive attachments/files          Internal file transfer within the company          Allows the creation of extranets          Surf internal information/webpages          Sharing/use of applications/resources</p>	2
3b	<p><b>Four from, with descriptions:</b></p> <p>Email          Use of the web          Newsgroups          Online chat          Streaming          Internet telephone          Online conferencing          Gaming          File transfer</p>	4

3c	<p><b>Benefits</b></p> <p>Max four:</p> <ul style="list-style-type: none"> <li>Can reduce cyber bullying/hate speech/sexual harassment</li> <li>Can reduce social media from being used for illegal activities</li> <li>Can reduce the ability to incite violence/trolling</li> <li>Could prevent people from being subjected to inappropriate messages</li> <li>Can reduce illegal/inappropriate images</li> </ul> <p><b>Drawbacks</b></p> <ul style="list-style-type: none"> <li>Freedom of speech is reduced</li> <li>Would be very difficult to police as there is a massive amount of information</li> <li>Different rules in different countries and social media crosses borders</li> <li>Very costly to create an effective deterrent</li> <li>Could force individuals to use other un-policed methods of communication</li> <li>Who decides what is acceptable and what is not acceptable</li> <li>Privacy issues as people checking could read messages</li> <li>Difficult to police as users can be anonymous</li> </ul> <p><b>To gain full marks there needs to be benefits and drawbacks</b></p>	8
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Question	Answer	Marks
4a	<p><b>Four from:</b></p> <ul style="list-style-type: none"> <li>Information overload</li> <li>Web sites at the top of the list may not be relevant</li> <li>May be more irrelevant information</li> <li>Search engines may not include all web pages</li> <li>If a website loads faster, it is given priority</li> <li>Search engine company may be paid to display certain web pages</li> </ul>	4
4b	<p><b>Six from:</b></p> <ul style="list-style-type: none"> <li>Check the author of the website as anybody can publish their understanding of a topic</li> <li>Check if the website has excessive advertising</li> <li>Check the content/advertising of its own products of a website to see if it biased</li> <li>Check the final part of the domain name of the URL</li> <li>Example .ac, .gov, .org</li> <li>Check if site is endorsed by reliable/reputable people/organisations</li> <li>Check if it has links to other reliable sites</li> <li>Check if it has testimonials/reviews</li> <li>Check if the author's credentials are good</li> <li>Check if information is comparable to other information from reliable authenticated experts</li> <li>Check if the date of the last update was a long time ago</li> <li>Check if website has excessive spelling and grammar mistakes</li> <li>Can compare information from other sites to see if it is reliable</li> </ul>	6

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Question	Answer	Marks
5(a)	Web browser	1
5(b)	Blog	1
5(c)	Wiki	1

Question	Answer	Marks																				
6a	<p><b>Four from:</b></p> <p>Internet is used to share and distribute information outside the organisation whereas the intranet within an organisation</p> <p>Internet is used to send and receive emails and messages outside the organisation whereas intranet sends and receives messages within an organisation</p> <p>The intranet meets the needs of the organisation whereas internet aims to meet the needs of everybody</p> <p>The internet facilitates collaboration with others whereas the intranet is only used to collaborate with other members within an organisation</p> <p>The internet is used to browse the World Wide Web</p>	4																				
6b	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Facial recognition</th> <th>Password</th> <th>Voice Recognition</th> </tr> </thead> <tbody> <tr> <td>This method cannot access the smartphone unintentionally</td> <td></td> <td style="text-align: center;">✓</td> <td></td> </tr> <tr> <td>The accuracy of this method can be affected by noise</td> <td></td> <td></td> <td style="text-align: center;">✓</td> </tr> <tr> <td>This method requires the use of the smartphone's camera</td> <td style="text-align: center;">✓</td> <td></td> <td></td> </tr> <tr> <td>This method could be compromised by shoulder surfing</td> <td></td> <td style="text-align: center;">✓</td> <td></td> </tr> </tbody> </table>		Facial recognition	Password	Voice Recognition	This method cannot access the smartphone unintentionally		✓		The accuracy of this method can be affected by noise			✓	This method requires the use of the smartphone's camera	✓			This method could be compromised by shoulder surfing		✓		4
	Facial recognition	Password	Voice Recognition																			
This method cannot access the smartphone unintentionally		✓																				
The accuracy of this method can be affected by noise			✓																			
This method requires the use of the smartphone's camera	✓																					
This method could be compromised by shoulder surfing		✓																				

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Question	Answer	Marks
7a	<p><b>Two</b> from:</p> <p>Dedicated website/app/platforms It interacts with other users Can be used to find people with similar interests</p>	2
7b	<p><b>Six</b> from:</p> <p>Communicating with friends and colleagues all over the world Promotes collaboration and teamwork Instant communication Easy to find other people with common interests Allows the exchange of content or documents Allows people to share best practice/knowledge/skills It can help in community projects Gives up to date information Can give more confidence to some people who may be shy//develop social skills As it is seen by a lot of people helps advertising Easier for online buying and selling//market products Can be used more easily for analytics and market research It can promote talent quickly, musicians Make/socialise with new friends</p>	6

Question	Answer	Marks
8	<p><b>These are points they will need to be expanded upon to gain the mark</b></p> <p><b>Six</b> from:</p> <p>Removes freedom of speech International therefore would be difficult to police Laws are different in each country/state The dark net would increase Electronic crimes would move away from the internet to other places, making them harder to intercept Internet users can be anonymous therefore it will be difficult to track down Who chooses what is blocked could affect day to day browsing Concern that everything you do is being watched therefore privacy is lost Could be breaches in sending/receiving confidential/personal data as others could not see it Increase in cost of security Reduction in speed of browsing/search Could lead to corruption/bribery//police may use the data No one owns the internet so it would be impossible to police effectively Very expensive to police the internet as extra police force has to be set up As the internet is so big it is hard to keep track on all the activity As the internet is dynamic it would be impossible to check everything</p>	6

Question	Answer	Marks
9	<p><b>Four</b> from:</p> <p>Online discussion forum/social platform/website Where the posts are controlled/monitored by an administrator Those that break the rules are banned Filters out inappropriate posts Moderated forums have rules/policy</p>	4

Question	Answer	Mark
10	<p><b>Four</b> from:</p> <p>Online discussion forum/social platform/website Do not have an administrator Posts are not controlled/monitored Relies on a voluntary code from its users People write what they want There are no rules//Users cannot be barred for what they write</p>	4

Question	Answer	Mark
11	<p><b>Problem:</b></p> <p><b>Award a mark for each problem identified</b> <b>Max four</b> from:</p> <p>If I receive requests from unwanted users/people I do not know If I get approached from people I do not know If I receive unwanted and abusive messages If I wish to post images of myself on the social media site When talking to people on social media If someone tells me private and personal information about themselves</p> <p><b>Strategies</b> <b>Max five</b> from:</p> <p>I never arrange to meet them alone/take a chaperone I always tell a responsible adult if I plan to meet someone I always meet in a public place I always chat to them in the main room I avoid giving away personal information I block them and report them I report the sender of the messages I avoid publishing inappropriate images/videos I avoid showing images of myself in school uniform I always use appropriate language/content I respect other people's confidentiality Make your account private I only follow friends I do not post my location until I have left it</p>	6

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Question	Answer	Marks
12a	<p><b>Four from:</b>          WWW is a collection of information pages/websites/web pages          WWW is part of the internet          WWW is accessed through the internet          WWW is a service on the internet</p> <p>Internet is a global network of networks/Wide Area Network          Internet is the infrastructure</p> <p><b>To gain full marks the description must have correct answers for both WWW and the internet</b></p>	4
12b	<p><b>https://</b>  <b>One from:</b>          This is the hypertext transfer protocol secure          Set of rules/protocol to transfer web pages securely</p> <p><b>cambridgeinternational</b>          The domain name</p> <p><b>.org</b>  <b>One from:</b>          The top-level domain name          Registered as an organisation</p> <p><b>/IGCSE</b>          The folder/sub-directory in which the work is stored on Cambridge International's server</p>	4

Question	Answer	Marks
13(i)	<p><b>Four from:</b>          The laws within a country//In some countries emails are monitored and people are punished for what they write          Using emails for marketing purposes//Laws differ in different countries          Netiquette          Local guidelines set by an employer          The need for security//Some countries monitor keywords in emails          Password protection does not allow people to see the contents          Cultural offences</p>	4
13(ii)	<p><b>Two from for example:</b>          Include a clear, direct subject line          Use a professional email address          Use professional salutations          Use exclamation points sparingly          Be cautious with humour/sarcasm/slang          Proofread the message before you click send          Do not use capital letters as it implies shouting          Do not use swear/offensive words          Do not use defamatory comments          Protect others privacy</p>	2

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Question	Answer	Marks
14a	2193733.pdf	1
14b	igcse-ICT-0417	1
14c	www.cambridgeinternational.org	1
14d	Secure internet protocol	1

Question	Answer	Marks
15a	<p>Two from:</p> <p>Spam is junk mail</p> <p>Sent in large numbers to inboxes</p> <p>Unwanted/unsolicited emails</p> <p>Fills the inbox</p> <p>Used for advertising</p> <p>Used for phishing/spreading malware</p>	2
15b	<p>Max four from:</p> <p>Multiple spelling/grammatical errors</p> <p>Asked to carry out tasks immediately</p> <p>Asking to click on a link</p> <p>Does not ask for you by name</p> <p>Stored in a SPAM folder</p> <p>Email asks for personal information</p> <p>Large amount of repeated emails from same user</p> <p>Lots of other similar email addresses in the send to box</p> <p>Max four from:</p> <p>Use a spam filter</p> <p>Not filling your details on online form</p> <p>Not replying to spam emails</p> <p>Not having an auto reply set</p> <p>Not consenting to marketing when providing details to a company</p> <p>Do not give email address</p>	6

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Question	Answer	Marks
16a(i)	<p>Two from:</p> <p>Public access</p> <p>Its world wide/international</p> <p>Vast collection of computers and networks/network of networks/WAN/Wide Area Network</p>	2
16a(ii)	<p>Two from:</p> <p>Private network</p> <p>Restricted access</p> <p>Used in companies and organisations</p> <p>Used to share internal documents, internal emails</p> <p>Uses internet technology</p>	2
16b	<p>Six from:</p> <p>Vast amount of information</p> <p>Faster to access information</p> <p>Search engines allow the user to search quickly vast amounts of information</p> <p>Information increases all the time</p> <p>Its widely available</p> <p>Allows users to meet other people/like minded people/communicate with friends over long distances</p> <p>Easy for all people to use</p> <p>Allows people to easily join specialist world wide groups</p> <p>Allows social networking</p> <p>Pages are hyperlinked so easier/quicker to find related pages</p> <p>Allows online shopping/banking</p> <p>Allows online up to date news, sports around the world/TV on demand</p> <p>Allows interactivity, such as watching a video to see how to do a task/training aid</p> <p>Helps vulnerable people to communicate with others</p> <p>Allows people to be creative/make own websites</p>	6

Question	Answer	Marks
17	<p>Three from:</p> <p>The sender only needs to type in the name of the group</p> <p>Saves time rather than typing out all the email addresses</p> <p>Less likely that an email address is omitted</p> <p>The sender does not have to remember individual email addresses</p> <p>Less likely to send the same email twice to one villager</p> <p>Less likely to send emails to the wrong people</p>	3

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Question	Answer	Marks
18a	<p><b>Four</b> from:</p> <p>Unsolicited email</p> <p>Sent in bulk</p> <p>Sent to an indiscriminate recipient list</p> <p>Sent by bots</p> <p>Email is not personalised</p> <p>May have many spelling/grammar errors</p> <p>Max <b>two</b> from:</p> <p>May ask to buy something</p> <p>May ask for passwords/financial/personal information</p> <p>May ask to carry out the task immediately</p> <p>May ask you to click on a link</p>	4
18b	<p><b>Two</b> from:</p> <p>Don't post your email address on public websites/social media</p> <p>Untick the box allowing your email to be used for marketing purposes</p> <p>Don't reply to spam emails</p> <p>Don't click links in the spam email</p> <p>Use a spam filter</p> <p>Block the sender's email <u>address</u></p>	2

Question	Answer	Marks
19	<p><b>Four</b> from:</p> <p>It provides guidance/best practice rules for organisations to follow on how to use personal data</p> <p>Regulates the processing of personal data</p> <p>Protects the rights of the data subject</p> <p>Helps to prevent personal data being misused by third parties</p> <p>Protects personal data</p>	4

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Question	Answer	Marks
20a	<p><b>Three from:</b></p> <p>Automatic reply to messages          Auto-forward and redirection of messages          Facility to send copies of a message to many people at once          Automatic filing and retrieval of messages          Addresses can be stored in an address book and retrieved instantly          Notification if a message cannot be delivered          Emails are automatically date and time stamped          Signatures can be attached          Attachments can be sent</p>	3
20b	<p><b>Two from:</b></p> <p>Allows the user to send a message privately to some of the recipients          Any recipients on the bcc line of an email are not visible to other recipients of the email          Security method as emails are hidden in bcc list</p>	2

Question	Answer	Marks
21a	List of contacts to send the same email to a number of people	1
21b	Copy of email sent to other recipients at same time as original is sent so all recipients can see who received the email	1
21c	Stored list of email addresses	1
21d	<p><b>One from:</b></p> <p>Copy of email sent to other recipient(s) at same time as original is sent without recipients knowing</p>	1