

MARK SCHEME for the May/June 2013 series

**9713 APPLIED INFORMATION AND
COMMUNICATION TECHNOLOGY**

9713/32

Paper 3 (Written B), maximum raw mark 80

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

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1 (a) **Four** descriptions from, e.g.:

Health services:

- With details of medicines
- Details of common ailments and how to treat/cure them
- Names and contact details of doctors/hospitals/health centres
- Comparisons of waiting lists allowing choices for treatment to be made
- Facilities for booking appointments with doctors

Employment Services:

- Show location of job centres/employment agencies
- Online training services
- Online recruitment facilities
- Search for employment opportunities

Educational Services:

- Educational opportunities/availability of courses/training
- Allowances paid to students

Legal Services:

- Crime prevention information
- Local crime statistics

Motoring Services:

- Driver licencing/permits
- Driving tests/driver training
- Taxing vehicles
- Roadworthy tests on vehicles

Community Services:

- Information on local amenities/services
- Online voting registration/services

Financial Services:

- Taxation, e.g. information/payments/property taxes/rate of taxation/publically owned utilities
- Benefits/grants
- Financial advice

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(b) (i) Two from:

Perceived/worrying gap between people who have access and those who do not have access to IT services
 Skilled IT users and unskilled/no-skills IT users

[2]

(ii) Ways include, e.g.:

Improved communications coverage/infrastructure for Internet access and mobile/cell phones
 Provision of public access to Internet facilities in, e.g. government buildings/libraries/schools and Internet kiosks
 Provision of (cheap) laptops/PCs to, e.g. elderly/poor/school children
 Provision of (cheap) mobile or cell phones to, e.g. elderly/poor/school children
 Recycling of discarded PCs/laptops
 Recycling of used/second hand mobile or cell phones
 ...for use by underprivileged/disenfranchised
 Provision of training services/sessions
 ...free of charge/reduced rates/in government centre/in local communities

[6]

2 (a) Descriptions from:

Register with auction site/set up account
 Setting up user ID and password
 Set up security question
 Use 'captcha'/authentication process
 Accept conditions
 Set up categories of goods to sell
 Display good details/descriptions with images and price
 Set auction time limit with 'buy now' price and shipping costs
 Payment options
 Returns policy with contact details
 Confirmation options
 Allow feedback and comments

[5]

(b) Three from:

Log in details may be accessed and used by others to bid on goods
 Personal contact details may be stolen and misused/used in identity theft
 Financial/credit card detail may be stolen and used to purchase goods/in fraudulent transactions
 Website may carry malware so, e.g. Trojans/viruses/spyware/adware may be downloaded to the computer, log in details may be accessed and used by others to bid on goods
 Personal contact details may be stolen and misused/used in identity theft
 Details may be used for advertising/spam emails

[3]

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(c) **Benefits** from, e.g:

- Can buy/bid at any time
- Can buy/bid from any location
- Can use any Internet-enabled device
- Can compare Ahmed's prices with other sellers' prices
- No need to spend money on travelling to shop
- No need to waste time travelling to shop

Drawbacks from, e.g:

- Cannot actually examine the goods/must rely on seller's description
- Must have credit/debit/suitable payment method available
- Must wait for seller to despatch goods/goods to arrive
- Seller may not be reliable/may not send goods
- Limited protection by consumer legislation against fraud or faulty goods or misrepresentation
- Owners of auction site may not support claims against seller

Max 6 marks for all benefits or all drawbacks **[8]**

3 (a) (i) Two from:

- Private computer network
- Using Internet protocols/IP
- To share company information/data/files securely **[2]**

(ii) Two protocols from, e.g.:

- FTP/file transfer protocol
 - for uploading data/files/pages to web server
- HTTP/hypertext transfer protocol
 - for accessing web pages
- HTTPS/hypertext transfer protocol secure
 - for secure data transfer
- SMTP
 - for email
- IMAP
 - for email
- TCP/IP
 - for packet transmission
- SSH
 - for secure access **[4]**

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(b) Four from, e.g:

Download user profile to desktop
 Email between employees/managers
 Electronic diaries to co-ordinate/arrange meetings
 Video conferencing
 Store company templates and company information/data securely/with no public access
 Inform employees/managers about company initiatives/news
 Share files projects between employees
 Forums for discussions
 (Web)blogs for projects
 Have internal website for hotel/company only

[4]

(c) Three benefits from:

Can access company documents from anywhere in company (as and when needed)
 Increase in workforce productivity as employees can locate company documents/templates/data (using web browser)
 No need to send/produce hardcopy to every employee
 ...can use email/instant messaging between employees
 Increase in collaboration between employees
 ...with all information available, saving time
 Company/corporate knowledge/information easily updated sent to/available to all employees
 Reduced costs as employees view online compared to hardcopy
 Can restrict access to outside network/Internet
 ...greater productivity
 Data/company information is more secure
 ...because intranet is private
 Can restrict/control access to content on intranet
 ...restrictions to content
 ...restrictions to who can view/access content, e.g. level of responsibility

[6]

4 Five from, e.g. :

Search for hotels in Brazil/example of search
 Choose language
 Select dates start/end date/duration of stay
 Select number of rooms
 Select number of occupants
 Select facilities/options
 Enter personal details such as home/contact details
 Enter payment details credit/debit card to guarantee/pay for rooms
 Confirmation of booking print/save at once/via email

[5]

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5 (a) Explanations from:

Physically disabled people could have difficulty in using mouse/keyboard
 ...for site navigation
 Visually impaired with difficulty in reading text
 ...due to, e.g. font
 Visually impaired with difficulty in understanding images
 ...due to colour/contrast
 Hearing impaired with difficulty in following commentaries/audio instructions/movie or video soundtracks
 ...e.g. speed of information flow/background noise levels
 People with cognitive impairment/learning difficulties have difficulty understanding instructions/booking process
 ...so create an incorrect booking/unable to complete booking **[4]**

(b) Four from, e.g.:

Use of alt tags/alternative text for images
 Simplify complex language into simpler words/sentence constructs
 Audio instructions can be downloaded
 Alternative telephone line dedicated to accessibility issues staffed by trained personnel
 Increase in font size
 Zoom/magnifying feature
 Use of different background colours **[4]**

6 (a) Three from:

Streamed/downloaded video/audio content from remote server
 Distributed by IPTV over a network
 Use of menu to select content
 Viewer can watch/listen at their own convenience/when they want to
 Use of pause/rewind/fast forward
 Received by set top box/computer/mobile device **[3]**

(b) Four from:

MP3 uses compression/CD audio uncompressed
 MP3 players use hard disks/flash memory/CD audio stored on optical media
 MP3 players have large capacity/store more songs/tracks than CD media/CD media limited to 70/80 minutes
 MP3 player content can be changed/deleted/CD content cannot be changed **[4]**

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7 Descriptions from:

Computer Assisted Personal Interviewing where both interviewer and interviewee are together in same room

- Questions are put by the computer program
- Interviewer asks questions as prompted by computer program
- An interviewer keys in responses from interviewee directly into a purpose-built computer program on a small device or on a laptop

Computer Assisted Telephone Interviewing where interviewer is usually in a call centre

- Computer dials number from a database of potential customers
- Using software based systems to make calls and then connect interviewer with interviewee
- Interviewer asks questions as prompted by the computer program
- Keys in responses from interviewee directly into a purpose-built computer program

Computer Aided Web Interviewing where interviewee accesses online questionnaire

- Interviewees need access to Internet and web browser
- Questions are multiple choice
- Computer used responses to one question to choose next question to ask
- Use of branching logic statements to choose which questions to ask
- Interview guests in room/after visit
- Track use while guests in room
- Analyse data and display in graphs/reports/summary tables

Interview guests in room/after visit

- Track use while guests in room
- Analyse data and display in graphs/reports/summary tables

Use questionnaires to collect information from guest

- Left in room/checkout
- Sent by email

One mark for the method, one mark for the description.

[6]

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8 (a) Three from:

Wireless fidelity
 Wireless networking
 Using radio waves
 Use of shared spectrum/different frequency
 Requires wireless NIC
 Used by mobile devices to connect to network

[3]

(b) Three comparisons from:

No need for sockets at all/guest can use anywhere in room with WIFI/sockets need to placed where convenient for guest with cables
 Range may be limited/poor connection in some rooms/parts of room with Wifi/connection is always good with cables
 Connection must be secure with Wifi/no need for secure connection with cables
 Limited bandwidth/data transfer rate with WiFi/greater bandwidth with cables
 Can connect more than one device with WiFi/only one device can be connected per socket with cables
 WiFi can be cheap/easy to install/cables need proper installation/can be expensive to wire all rooms
 High power consumption with WiFi/low power consumption with cables
 Interference from other devices with WiFi/little interference with cables
 Low data transmission rates with WiFi/high data transmission rates with cables

[3]