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   **[8]**

(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]**

(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]**

(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]**

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]**

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]**

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]**