



General Certificate of Secondary Education  
2011

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**Information and Communication Technology**

Full Course

Paper 2

Foundation Tier

[G5802]

THURSDAY 16 JUNE, AFTERNOON

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**MARK  
SCHEME**

1 (a)

Student ID	Examination Code
1001	GCSE03
1001	GCSE05
1003	GCSE01
1000	GCSE01
1005	GCSE06
1002	GCSE06

order  
irrelevant

[4]

(b) (i)

Fieldname	Data type
Student ID	Numeric/Number [1]
Examination Code	String/Character/Alphanumeric [1]/ String/Character/Alphanumeric/ Text [1]
Date of Birth	Date/DateTime [1]

[3]

(ii)

Tablename	STUDENT	STUDENT	STUDENT- EXAMINATION	EXAMINATION	STUDENT
Fieldname	Forename [1]	Surname	Examination Code	Examination Name	Gender [1]
Criteria				ICT [1]	=“F”

(iii) Query/Filter [1]

[1]

11

AVAILABLE  
MARKS

2 (a) (i) Optical Mark Recognition [1]/Reader [1] [1]

(ii) One from:  
National Lottery (NOT Lottery Tickets) [1]/Multiple choice examinations/(Reading/Marking Multiple Choice) [1]/ school register/Attendance [1] [1]

(iii) Two from:  
Faster processing of documents or data/faster results because of speed of input [1]/Faster than typing/Batch entry of data [1] Improved accuracy [1]/Less mistakes [1]/No human error [1] Minimal training required [1] [2]

(b) (i) Optical Character Recognition [1]/Reader [1] [1]

(ii) Scanner [1] [1]

(c)

File type	Meaning	
RTF	Rich Text Format	
JPEG	Joint Photo(graphic) Experts Group	[1]
TXT	TEXT	[1]
MPEG	Moving Pictures Experts Group	[1]

9

3 (a) (i) One from:  
To monitor/view order/purchase history [1]/to check credit available [1]/to check payments/bills [1] [1]

(ii) One from:  
To check/track the status of a current order [1] to check/track delivery/dispatch of a current order [1] [1]

(b) Two from:  
Can shop anytime [1]  
Can buy goods from anywhere [1]  
Wider range of products [1]  
Can shop from home [1]/Products delivered to home [1]  
More competitive pricing [1] [2]

- (c) **Two** from:  
 Larger/worldwide customer base [1]  
 Immediate communication with customers [1]  
 Can sell 24 × 7 [1]  
 Less overheads [1]/Less staff [1]/Less or No Premises [1]  
 Less money in stock [1]  
 Online database of customers can be maintained [1]  
 Easy updating of product information [1]  
 Cheaper advertising via website [1] [2]

6

- 4 (a) **Two** from:  
 Flexible – can be sent/received anytime [1]  
 No paper – an inbox contains all mail [1]/Environmentally friendly/  
 Saves paper [1]  
 Instant delivery of mail [1]  
 Cheaper than ordinary mail [1]/telephone [1]/fax [1]  
 Filtering of email can be done [1]  
 Attachments can be sent [1]  
 Emails can be sent securely [1]  
 Emails can be sent more widely to patients/Multiple people/Multiple  
 emails [1]  
 Receiver doesn't have to be present [1] [2]

- (b) So that he can receive handwritten/signed documents/drawings [1]/  
 No risk from viruses [1]/can be used to send/receive information when  
 people do not have email [1]/can be used when the Internet is down [1]  
 [1]

- (c) **Two** from:  
 Reports on patients missing appointments/cancelled appointments [1]  
 Busiest doctors/peak times [1]  
 Overall time spent with patients [1]  
 Number of appointments per patient [1]  
 Information about an appointment/patient details [1] [2]

- (d) > 2 ticks 0 marks

Statement	Tick (✓)
SMS means Short Message Service	✓
SMS can only be sent using a mobile phone	
SMS can be received when a call is in progress	✓
SMS allows users to send photographs	

[2]

			AVAILABLE MARKS
(e)	(i)	Personal Digital Assistant [1]	[1]
	(ii)	<b>Two</b> from: Internet [1] Internet applications [1] (accept 2 separate Internet applications) Email [1] Maps [1] GPS services [1]	[2]
			10
5	(a)	(i)	Username [1] Password [1]
		(ii)	Ensure that only authorized users access data/post information [1]/Unauthorized people cannot access data/post [1]
			[2]
	(b)	Any <b>one</b> from: Compressed document [1] cannot be changed [1] portable document format [1]/Use it on a variety of platforms [1]	[1]
	(c)	(i)	Digital Versatile/Video Disk [1]
		(ii)	Compact Disk – Read Only Memory [1]
			[2]
	(d)	<b>Two</b> from: Contacting parents/Staff/Students [1]/printing reports [1]/storing pupil details [1]/payroll [1]/costing using spreadsheets [1]/entering pupils for exams [1]/Student attendance [1]/Producing documents [1]	[2]
			7
6	(a)	(i)	Asymmetric(al) Digital Subscriber Line [1]
		(ii)	No dial-up [1] ADSL faster connection [1]/Digital line [1] Higher/Wider Bandwidth [1]/Faster download or upload speeds [1]
			[2]
	(b)	(i)	Any <b>one</b> from: Black spots [1] Concerns about health [1] Security/hacking [1] Excessive demand on bandwidth might slow down data transmission [1]
			[1]
		(ii)	Any <b>one</b> from: May attract more customers [1] Can be accessed anywhere in the hotel [1] Residents can add their device to the network [1]
			[1]

(c) Any **two** from:

- Email [1] Webspaces [1] user help [1] filtering/parental control [1]
- Firewall [1] virus protection [1]/antivirus [1]
- Bandwidth Options [1]
- Junkmail/Pop-up Blocker [1]

[2]

AVAILABLE  
MARKS

6

7 (a) (i) Any **two** from:

- Difficult to monitor staff work hours [1]
- Difficult to help staff if they are having problems [1]
- Has to supply them with (expensive) equipment [1]
- May have to pay part of their bills, e.g. Internet, telephone, electricity [1]
- Less security of data files [1]
- Technology failure [1]

[2]

(ii) Any **one** from:

- No social interaction with colleagues [1]/No teamwork [1]
- Difficult to get work / life balance [1]
- Never leave work environment [1]
- Too many distractions [1]

[1]

(b) > 2 ticks 0 marks

Method of communication	Tick (✓)
Instant Messaging	✓
Video conferencing	✓
Fax	
Email	

[2]

(c) > 1 tick 0 marks

Job	Tick (✓)
Computer programmer	
Help desk operator	
Hardware designer	
ICT technician	✓

[1]

6

- 8 (a) Any **two** from:  
RSI [1] Back Strain [1] Neck Strain [1] Eye strain [1] carpal tunnel syndrome [1] Obesity [1]/Headaches [1] [2]
- (b) Any **two** from:  
Take regular breaks [1] adjustable chair [1] use screen filters [1] ergonomic mouse/keyboard [1] foot rest [1] wrist rest [1] appropriate lighting [1] Tilt screen/Eye level/Distance from screen [1] [2]
- (c) Any **one** from:  
No food or drink [1]  
No trailing cables [1]  
Uncluttered work area [1]  
Safety test equipment [1]/Use equipment in line with Rules/Instructions [1]  
No over loading of sockets [1]  
Switch off when not in use [1] [1]
- 9 (a) Faster processing of data [1]  
Faster updating/merging [1]  
Masterfile can be updated quicker [1]  
Don't waste time searching for matching records [1]  
Only has to go through the masterfile once to update the Masterfile [1] [1]
- (b) Any **one** from:  
Not high enough quality print out [1]  
Expensive for large volume printing [1]  
Too slow for high volume printing [1] [1]
- (c) Any **one** from:  
Saves paper [1]/Environmentally friendly [1]  
Bills can get lost in the post [1]  
Saves on cost of postage/paper [1] [1]
- (d) Any **two** from:  
Data entered by two people/double entry/twice [1]/Checked for similarity/mistakes [1]  
Two data values compared [1]  
Don't match [1]  
Error reported [1]/Rejection/Correction  
Proof reading [1] – explanation of proofreading [1] [2]

AVAILABLE  
MARKS

5

5

			AVAILABLE MARKS
<b>10 (a)</b>	Any <b>one</b> from: Less cost [1]/safer for trainees [1]/extreme conditions can be simulated [1] monitor performance [1] cannot cause damage to equipment [1] real life experience [1]	[1]	
<b>(b)</b>	Any <b>two</b> from: Not all factors taken into consideration [1] Expensive to design [1]/Implement/Setup [1]	[2]	
<b>(c)</b>	Any <b>two</b> from: HMD (Head Mounted Devices)/Headsets/VR Visor/Helmet [1] Gloves [1] Tracking devices/Joysticks/Controller/Balance Board [1] Body suits with sensors [1]	[2]	5
<b>11 (a)</b>	Any <b>three</b> from: Variety of packages available [1] On demand TV/Anytime TV [1] More channels [1] High Definition (HD) TV/Better quality image/sound [1] Play games [1] It is interactive [1] You can send emails [1]/Internet services [1]/Internet connection [1] Includes radio channels [1] You can lock undesirable channels [1] You can program channels to come on automatically/Electronic Program Guide (EPG) [1] Pause live TV/Record and watch at same time [1]	[3]	
<b>(b) (i)</b>	Disadvantages to TV companies – Any <b>one</b> from: Cost of hardware for changeover [1] Increased cost of subscriptions – (may lose customers) [1] Increased cost of transmission (via digital communication links) [1] – need to lease or buy new communication links [1] more competition [1]	[1]	
<b>(ii)</b>	Reluctance of customer – Any <b>two</b> from: Might not want to purchase new TV with digital box [1] Cost of installation/subscription/Affordability [1] May be happy with analogue TV [1] Might not know how to use digital TV [1] Don't want more channels/will not view all channels [1] Feeling that analogue more reliable/mistrust of technology [1]	[2]	6
	<b>Total</b>		76
	<b>QWC</b>		4
	<b>Total</b>		<b>80</b>

The assessment of quality of written communication.

Marks to be allocated for QWC in one of two ways.

Where QWC is to be allocated across 2 marks, the following criteria must be used:

- [2] Accurate spelling and punctuation. Some specialist terms used.
- [1] Reasonably accurate spelling and punctuation. Limited range of specialist terms used.
- [0] Question not attempted.

Where QWC is to be allocated across 3 marks, the following criteria must be used:

- [3] Highly accurate spelling and punctuation. A good range of technical terms used.
- [2] Accurate spelling and punctuation. Some technical terms used.
- [1] Reasonably accurate spelling and punctuation. Limited range of technical terms used.
- [0] Question not attempted.