

**ADVANCED GCE**  
**INFORMATION AND COMMUNICATION TECHNOLOGY**

**2515**

Communications Technology and its Application

**THURSDAY 5 JUNE 2008**

Afternoon  
 Time: 1 hour 30 minutes

Candidates answer on the question paper

**Additional materials:** No additional materials are required



Candidate Forename

Candidate Surname

Centre Number

Candidate Number

**INSTRUCTIONS TO CANDIDATES**

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided.

**INFORMATION FOR CANDIDATES**

- The number of marks for each question is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this paper is **90**, of which 4 marks are allocated to the assessment of the quality of written communication.
- You will be awarded marks for the quality of written communication where an answer requires a piece of extended writing.
- No marks will be awarded for using brand names of software packages or hardware.

FOR EXAMINER'S USE		
1		12
2		24
3		18
4		16
5		16
<b>QWC</b>		<b>4</b>
<b>TOTAL</b>		<b>90</b>

This document consists of **12** printed pages.

1 A second hand bookshop has been selling books over the counter and by post for many years. It is to introduce an e-commerce system that will allow customers to place and pay for orders on-line.

(a) Describe **one** retraining need of staff in the shop so that these orders may be processed.

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..... [2]

(b) Explain **one** advantage to the owners of the bookshop of the introduction of this e-commerce system.

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..... [2]

(c) Explain **one** advantage to the customer of the introduction of this e-commerce system.

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..... [2]

(d) Explain **one disadvantage** to the customer of the introduction of this e-commerce system.

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..... [2]

(e) Two stages of the systems cycle are testing and evaluation.

(i) Describe **one** method of testing the e-commerce system.

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..... [2]

(ii) Describe **one** method of evaluating the e-commerce system.

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..... [2]

2 A user sets up a wireless broadband network in a house.

(a) State **two** factors that may reduce reception of the wireless signal around the house.

Factor 1 .....

Factor 2 ..... [2]

(b) Describe **two** advantages of using a wireless network rather than one with cables.

Advantage 1 .....

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Advantage 2 .....

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..... [4]

Three items of hardware installed in the network are a router, print server and a repeater.

(c) Explain the purpose of each of these items in the context of the home broadband network.

(i) Router

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(ii) Print server

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(iii) Repeater

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..... [2]

The broadband connection is advertised as “ADSL 8Mb/s maximum dependent on bandwidth”.

(d) Explain the term bandwidth.

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..... [2]

(e) Explain how bandwidth will be affected by different communication media that could be used in this network.

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..... [2]

The user stores pictures on an on-line photo-sharing website.

(f) Explain the impact of having ADSL on the time taken to upload photographs to the website compared to downloading them.

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..... [2]



3 A satellite broadcasts programmes from a number of television companies.

(a) (i) Describe **one** advantage to the customer of using satellite television as opposed to cable television.

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..... [2]

(ii) Describe **one** disadvantage to the customer of using satellite television as opposed to cable television.

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..... [2]

(b) One of the television companies broadcasts live sporting events.

Describe the process of delivering the live event from the sports venue to a customer's television set.

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A subscription service is offered by one of the television companies. Customers can contact a call centre to manage their subscriptions.

- (c) When customers ring the call centre they are presented with menus of choices.

Explain why the company uses menus on its telephone system.

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- (d) When staff in the call centre answer a call, they are able to access customer and subscription data via the television company's intranet.

Describe **three** differences between an intranet and the Internet.

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- (e) The television company keeps audit logs to help maintain confidentiality of data.

State **three** items of data about a customer call that might be recorded in such an audit log.

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..... [3]



4 A bank offers insurance to its customers. To receive a quotation for the cost of insurance, a customer has to complete a series of on-line forms.

(a) After completing each form, the customer is given feedback by the computer. The feedback could be provided in a dialogue box.

(i) Explain **one** advantage to the customer of using a dialogue box.

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..... [2]

(ii) Give **two** other methods by which feedback could be given to the customer.

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(iii) Explain why feedback is important to the customer.

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**Turn over for next question**

(b) Describe **three** features of the on-line form, other than feedback, that would make for good human-computer interaction. For each feature, explain how it would help the customer.

Feature 1 .....

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How it would help the customer .....

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Feature 2 .....

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How it would help the customer .....

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Feature 3 .....

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How it would help the customer .....

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..... [9]

5 Information technology (IT) is used in accessing directory enquiries. There are various methods of providing such services:

- User dials a directory enquiries service;
- User accesses an on-line directory enquiry service by a website;
- User accesses an on-line (WAP) directory enquiry service via a cellular (mobile) telephone.

(a) Describe the processes carried out after a user dials a directory enquiries service.

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(b) State **two** items of data that need to be entered to look up a telephone number on an on-line directory enquiry service.

Item 1 .....

Item 2 ..... [2]

(c) Explain the limitations of using an on-line directory enquiry service via a website.

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**Turn over for last question**

