

OXFORD CAMBRIDGE AND RSA EXAMINATIONS

Advanced GCE

INFORMATION AND COMMUNICATIONS TECHNOLOGY 2515

Communications Technology and its Applications

Tuesday **24 JANUARY 2006** Morning 1 hour 30 minutes

No additional materials are required.
Candidates answer on the question paper.

Candidate Name	Centre Number	Candidate Number												
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TIME 1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

- Write your name in the space above.
- Write your Centre number and Candidate number in the boxes above.
- Answer **all** the questions.
- Write your answers, in blue or black ink, in the spaces on the question paper.
- Read each question carefully and make sure you know what you have to do before starting your answer.

INFORMATION FOR CANDIDATES

- The number of marks 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		14
2		16
3		12
4		16
5		14
6		14
QWC		4
TOTAL		90

This question paper consists of 16 printed pages, 3 lined pages and 1 blank page.

1 (a) A chain of book shops has recently introduced a facility for customers to buy books using electronic commerce (e-commerce).

(i) Explain **two** advantages and **one** disadvantage of e-commerce for the customer.

Advantages

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Disadvantage

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- (ii) Explain **two** advantages and **one** disadvantage of e-commerce for the book shop management.

Advantages

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Disadvantage

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(b) Data sent over the Internet may be encrypted.

Explain the purpose of encryption.

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(b) Explain the purpose of each of the following network components:

(i) server

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(ii) hub

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(iii) router.

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- (c) The company employs sales representatives to market their jigsaws throughout the UK. Each representative is equipped with a cellular (mobile) phone.

Explain how a cellular phone network operates.

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An international manufacturing company has branches and employees throughout the world.

(b) Explain the advantages and disadvantages to the company in using satellites as a means of voice communication between branches and employees.

Advantages

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Disadvantages

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(c) Identify **two** other uses of satellite communication which may be used by the company.

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(b) (i) Explain the importance of bandwidth with respect to the transmission of data.

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(ii) Describe how different types of transmission media determine the bandwidth available.

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