

FORM TP 2016230



TEST CODE **02229020**

MAY/JUNE 2016

**CARIBBEAN EXAMINATIONS COUNCIL**  
**CARIBBEAN ADVANCED PROFICIENCY EXAMINATION®**  
**INFORMATION TECHNOLOGY**

**UNIT 2 – Paper 02**

*2 hours 30 minutes*

**READ THE FOLLOWING INSTRUCTIONS CAREFULLY.**

1. This paper consists of **THREE** sections and **SIX** questions.
2. Answer **ALL** questions.
3. Write your answers in the spaces provided in this booklet.
4. Do **NOT** write in the margins.
5. If you need to rewrite any answer and there is not enough space to do so on the original page, you must use the extra lined page(s) provided at the back of this booklet. **Remember to draw a line through your original answer.**
6. **If you use the extra page(s) you MUST write the question number clearly in the box provided at the top of the extra page(s) and, where relevant, include the question part beside the answer.**

**DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.**

**SECTION I: INFORMATION MANAGEMENT**

**Answer ALL questions.**

**1.** The increasing number of users of the Internet has led to the generation of very large volumes of data.

(a) (i) Define the term 'data warehouse'.

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**[2 marks]**

(ii) Define the term 'data mart'.

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**[2 marks]**

(iii) Outline TWO ways the marketing division of a company may use data mining to improve its performance.

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**[4 marks]**

(b) Fresh Food Supplies is a company that purchases vegetables and fruits from small farmers and retails to larger supermarkets and individuals.

(i) Outline TWO ways in which the absence of timely data from farmers may affect Fresh Food Supplies.

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**[4 marks]**

(ii) Fresh Food Supplies received inaccurate data from farmers because the farmers miscalculated the harvesting periods.

Outline THREE ways in which this may affect the operation of Fresh Food Supplies.

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**[6 marks]**

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(c) Data flow diagrams (DFDs) are used in the analysis and design phase of database software systems.

(i) List THREE elements that are used to create data flow diagrams.

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**[3 marks]**

(ii) Describe TWO levels of data flow diagrams.

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**[4 marks]**

**Total 25 marks**

2. (a) Susan currently uses a table in Microsoft Word to save data on the books in her personal library. Part of the table that Susan uses is shown below.

Book ISBN	BookTitle	Cost	Author Name	Author Address	Author_Phone	Publisher_Name	Publisher_Address
123456X	Introduction to Pascal	20	Blaze Pascal	100 New Street, Nassau	123-455-1111	Book House	23 Old Hope Road, Georgetown
2345Z	Information Technology	36	Paul Smart	19 Main Street, Georgetown	231-098-3929	Pink Tree Publishers	54 Regent Road, Kingstown
012034B	Information Systems	40	Paul Smart	19 Main Street, Georgetown	231-098-3929	Pink Tree Publishers	54 Regent Road, Kingstown
012034B	Information Systems	40	Judy Smith	123 Forest Ave, Bridgetown	320-234-9870	Pink Tree Publishers	54 Regent Road, Kingstown

- (i) Other than book, identify TWO **other** entities named in the table above.

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[2 marks]

- (ii) Discuss TWO problems with the current approach to storing data on the books.

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[6 marks]

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- (b) Susan was advised to use a database to manage her books. To do so, the database must be designed and normalized.
- (i) Draw an entity-relationship (E-R) diagram to show the relationship among the entities.

[10 marks]

GO ON TO THE NEXT PAGE

- (ii) Using the design suggested in (b) (i) on page 8, write an SQL statement that lists all the books that **cost more than 25 dollars**.

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[7 marks]

**Total 25 marks**

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**SECTION II: USE OF INFORMATION TECHNOLOGY TOOLS**

**Answer ALL questions.**

3. (a) Peter coaches teenaged football players. However, after three months, he noted that his players were not improving. He was advised to use information technology (IT) to analyse this problem.

- (i) List TWO hardware IT tools that Peter can use in his analysis.

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**[2 marks]**

- (ii) Outline ONE way in which EACH of the tools listed in (a) (i) above can improve Peter's analysis.

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**[4 marks]**



- (iii) Discuss THREE communication tools that may be used by Peter to share his analysis with the players and receive their feedback.

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[9 marks]

- (b) Anderson works for a leading news agency. He reports on health issues facing tribal communities living in the forest.

- (i) Outline THREE formats of information that would be appropriate for Anderson to capture information for his reports. **Justify your answers.**

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[9 marks]

- (ii) List ONE format of information that would NOT be suitable for his reports.

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[1 mark]

Total 25 marks

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4. (a) (i) Outline TWO ways by which webpages can be created.

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[4 marks]

- (ii) Write the HTML code that will implement the following in a webpage:

- A level one header named INTRODUCTION
- A paragraph of text of your choice
- An ordered list of two items of your choice
- An image of size 100\*100

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[10 marks]

- (b) Jessie would like to publish her essays on the Internet. She decided to use a blog.

Outline THREE benefits of using a blog.

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[6 marks]

- (c) Intelligent appliances are now commonly found in many homes.

- (i) List TWO types of intelligent appliances.

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[2 marks]

- (ii) Discuss ONE way in which one of the appliances listed in (c) (i) above may lead to a more efficient home.

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[3 marks]

Total 25 marks

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**SECTION III: SOCIAL, ORGANIZATIONAL AND PERSONAL ISSUES**

**Answer ALL questions.**

5. (a) Information technology (IT) has impacted the way knowledge is managed within an organization.

Outline THREE ways in which IT has impacted knowledge management within organizations.

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**[6 marks]**

- (b) Copyright has emerged as one of the biggest problems associated with the use of information technology. However, IT can also help solve some of the copyright issues faced by companies and individuals.

- (i) Outline TWO ways in which information technology enables copyright violations.

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**[4 marks]**

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- (ii) Using examples, discuss TWO ways in which the Internet may enable organizations and individuals to address copyright issues.

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[4 marks]

- (c) Identity and information theft are two common types of computer crimes committed against individuals and organizations through the Internet.

- (i) Define the term 'identity theft'.

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[3 marks]

- (ii) Outline TWO practices individuals can implement to prevent identity theft.

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[4 marks]

(iii) Outline TWO email policies organizations can use to prevent information theft.

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[4 marks]

**Total 25 marks**

6. (a) Many risks and threats are associated with the ownership and use of computers.

Outline TWO mitigating strategies that may be used to counter EACH of the following risks:

(i) Hardware theft and vandalism

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[4 marks]

(ii) System failure

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[4 marks]

(iii) Software bugs or glitches

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[4 marks]

(b) Green computing practices can help mitigate environmental risks.

(i) Define the term 'green computing'.

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[2 marks]

(ii) State TWO green computing practices an organization may follow to mitigate environmental risks.

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[2 marks]

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- (c) An organization is known for using pirated software for some of its operations.

Discuss THREE issues that this organization is likely to face as a result of using pirated software.

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[9 marks]

**Total 25 marks**

**END OF TEST**

**IF YOU FINISH BEFORE TIME IS CALLED, CHECK YOUR WORK ON THIS TEST.**