



Let the mind manage the body  
Que l'esprit gère le corps

Index Number: .....

# NATIONAL CERTIFICATE OF EDUCATION

March / April 2021

## INFORMATION COMMUNICATION AND TECHNOLOGY (N540)

TIME: 1 HOUR 45 MINUTES

Candidates answer on the Question Paper.

### INSTRUCTIONS TO CANDIDATES

1. Write your index number in the space provided above.
2. Write in dark blue or black ink. Do not use correction fluid.
3. You may use a soft pencil for any diagram, graph or rough working.
4. Any rough working should be done in this booklet.
5. Do NOT use calculators.
6. Answer **ALL** questions.
7. This document consists of **9** questions printed on **20** pages
8. The number of marks is given in brackets [ ] at the end of each question or part question.
9. The total of the marks for this paper is **100**.

| For Examiners' use |   |   |   |   |   |   |   |   |   |       |           |
|--------------------|---|---|---|---|---|---|---|---|---|-------|-----------|
| Question No.       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Total | Signature |
| Marker             |   |   |   |   |   |   |   |   |   |       |           |
| Team Leader        |   |   |   |   |   |   |   |   |   |       |           |
| Quality Controller |   |   |   |   |   |   |   |   |   |       |           |
| CE/ACE             |   |   |   |   |   |   |   |   |   |       |           |

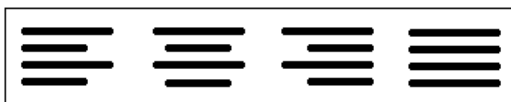
## Section A

### Question 1 (15 Marks)

Circle the letter corresponding to the correct answer.

Each item carries one mark.

- (a) In a word processor, what is the function of the following icons?

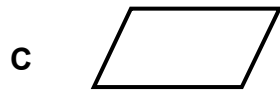
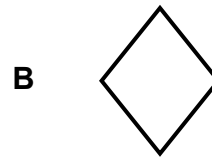


- A** Set the line spacing  
**B** Add extra lines  
**C** Copy and paste the text  
**D** Change alignment
- (b) Which of the following is a search engine?



- (c) In a spreadsheet, which of the following represents the three parts that make up an **IF** function?
- A** CONDITION, TRUE, FALSE  
**B** CONDITION, RANGE, CRITERIA  
**C** CONDITION, OPERATORS, CRITERIA  
**D** CONDITION, FUNCTION, RANGE

(d) In a flowchart, which of the symbols below is used to insert the message 'Display Sum'?



(e) *Disk Defragmenter* is a utility software designed to \_\_\_\_\_ .

- A reboot the computer system
- B share files
- C rearrange stored files
- D decrease access speed

(f) A \_\_\_\_\_ is a memory location that can be given a symbolic name.

- A counter
- B sequence
- C variable
- D construct

(g) **One** of the tasks of memory management is to \_\_\_\_\_ .

- A allow the user to interact with the computer system
- B deal with loading and running of application programs
- C allocate a time slice to each job to be processed
- D manage the transfer of data and files

- (h) The Data Protection Act is a law designed to protect \_\_\_\_\_.
- A personal information
  - B computers from hackers
  - C copyright materials
  - D ownership rights
- (i) An antivirus software \_\_\_\_\_.
- A detects and removes malware
  - B retrieves deleted files
  - C verifies user names and passwords
  - D optimises drives
- (j) Which one of the following uses radio waves to provide wireless high-speed internet?
- A HTML
  - B ISP
  - C WIFI
  - D RAM
- (k) The word processing feature which outlines the chapters or section names with their corresponding page numbers in a document is the \_\_\_\_\_.
- A Styles tab
  - B Page Break
  - C Font style
  - D Table of Contents

- (l) Which feature in a spreadsheet is used to replicate a cell's content?
- A Conditional formatting
  - B Fill handle
  - C Cell address
  - D Working style
- (m) What is the format of 'th' in the date '**20<sup>th</sup> March**'?
- A Italics
  - B Underline
  - C Subscript
  - D Superscript
- (n) A MODEM is \_\_\_\_\_.
- A a software that prevents unauthorised access to a private network
  - B a hardware that allows a computer to send and receive data
  - C an online service allowing users to stay in touch
  - D a company that provides access to the internet
- (o) The physical arrangement of a network is called a network \_\_\_\_\_.
- A interface
  - B drive
  - C topology
  - D security

**Question 2 (10 Marks)**

Fill in the blanks with the correct word from the list given below.

|              |            |                 |          |           |          |
|--------------|------------|-----------------|----------|-----------|----------|
| report       | podcasting | troubleshooting | hardware | ownership | HTML     |
| paraphrasing | router     | filter          | dialogue | template  | decision |

- (a) A device that allows the user to access the internet from two or more devices is a \_\_\_\_\_.
- (b) The transfer of data from input devices to computer memory is performed by \_\_\_\_\_ management.
- (c) Identifying and resolving a problem in a computer system is called \_\_\_\_\_.
- (d) A sample document that has been pre-formatted is a \_\_\_\_\_.
- (e) In a spreadsheet, a \_\_\_\_\_ is used to extract the data so that only the information needed is displayed.
- (f) Keeping the same meaning of an original text without copying the same words is called \_\_\_\_\_.
- (g) A computer language used to create websites is \_\_\_\_\_.
- (h) The legal right for the creation of resources on the internet is known as \_\_\_\_\_.
- (i) A \_\_\_\_\_ symbol is used to show a condition which may have two possible outcomes in a flowchart.
- (j) A free web service that makes audio files available for streaming and downloading is known as \_\_\_\_\_.

**Question 3 (10 Marks)**

Tick (✓) **True** or **False** next to each of the statements below.  
 An **example** has been provided.

|     |   | True | False |
|-----|---|------|-------|
| (a) | Disk formatting is an example of a utility program.   | ✓    |       |
| (b) | A paper jam prevents a printer from working properly.   |      |       |
| (c) | Vodcasting is a web service for streaming and downloading video files.                                  |      |       |
| (d) | In processor management, a time slice is given to each job that needs to be processed.                  |      |       |
| (e) | Radiation emitted by the screen may cause Repetitive Strain Injury (RSI).                               |      |       |
| (f) | In a COUNTIF function 'Criteria' refers to the conditions that must be met for the cells to be counted. |      |       |
| (g) | People do not need to sign in to join a chat room.  |      |       |
| (h) | A sequence is used to refer to steps that are repeated many times.                                      |      |       |
| (i) | <i>WordArt</i> can be used to add an artistic flair to your text.                                       |      |       |
| (j) | <i>DupliChecker</i> is an antivirus software.   |      |       |
| (k) | Styles are applied to a range of cells to keep the formatting of the worksheet consistent.              |      |       |

**Question 4 (10 Marks)**

- (a) Match **Column A** to **Column B** by writing down the corresponding number in the **Answer Grid** below. An **example** has been provided in the Answer Grid.

| Column A |                         | Column B |  |
|----------|-------------------------|----------|--|
| (i)      | Single-user system      | 1        | is the science of how we interact with the objects around us.              |
| (ii)     | Multi-user system       | 2        | is used to recover data in case of loss.                                   |
| (iii)    | Ergonomics              | 3        | <b>supports only one user at a time.</b>                                   |
| (iv)     | Multi-processing system | 4        | refers to a powerful computer that manages communication around a network. |
| (v)      | Server                  | 5        | is a single page of a presentation.  |
| (vi)     | References Tab          | 6        | allows several users to access a computer's resources at the same time.    |
| (vii)    | Data backup             | 7        | provides us with the option of creating a table of content in MS word      |
|          |                         | 8        | is capable of supporting and utilising more than one computer processor.   |

**Answer Grid**

| (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) |
|-----|------|-------|------|-----|------|-------|
| 3   |      |       |      |     |      |       |

**[6]**



(b) Write down the most appropriate type of network for each of the given characteristics.

|       | <b>Characteristic</b>                                     | <b>Most appropriate type of network</b> |
|-------|---|---|
| (i)   | Designed for a town or city                               |   |
| (ii)  | Connecting computers across a country or around the World |   |
| (iii) | Limited to a single site                                  |   |
| (iv)  | Limited to a small office or room                         |   |

[4]

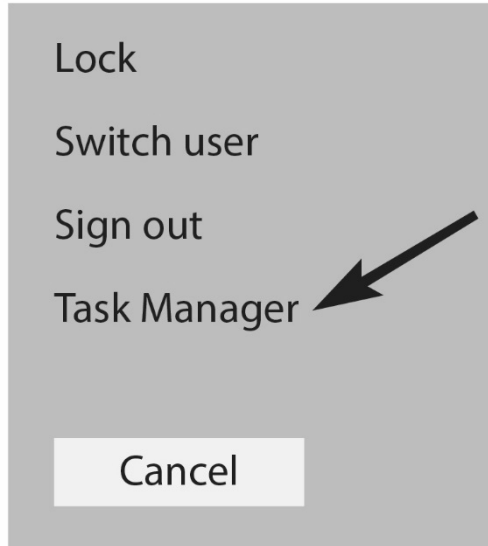
**Question 5 (8 Marks)**

- (a) **Tick (✓)** the **three (3)** possible solutions for the problem of 'Accidental deletion of a file'.

|   | <b>Solution</b>   | <b>Tick (✓)</b> |
|---|---|-----------------|
| 1 | Check that all cables are properly connected.   |                 |
| 2 | Open the Recycle Bin. Right-click on the file and click on Restore.                       |                 |
| 3 | Change the batteries of the wireless mouse or keyboard.                                   |                 |
| 4 | Press Ctrl + Z on the keyboard to retrieve the file.                                      |                 |
| 5 | Right-click on the icon where file was located. In the pop-up menu, select "Undo Delete". |                 |
| 6 | Turn the computer off and on again.   |                 |

**[3]**

(b) Which **three keys** should be pressed at the same time on the keyboard to open the menu shown below?



+  +

[3]

(c) (i) Give **one** possible cause of a blank screen when a computer is still on.

.....  
.....

[1]

(ii) Suggest **one** solution to the cause mentioned in (c) (i).

.....  
.....

[1]

### Section B

#### Question 6 (12 Marks)

(a) (i) GUI is a type of environment provided by Operating Systems.  
What does GUI stand for?

..... [1]

(ii) Give **two** features of a GUI.

1. ....

2. .... [2]

(iii) How is a GUI useful to users?

.....

..... [1]

(iv) Give **two** tasks that are carried out by an Operating System.

1. ....

.....

2. ....

..... [2]

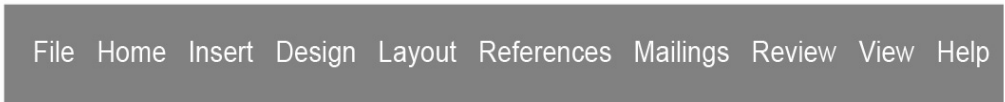
(b) Mail merge is a facility provided by a word processing program.

(i) What is **mail merge**?

.....  
.....  
.....  
.....

[2]

(ii) **Circle** the tab which must be clicked to start mail merge.



[1]

(iii) What are the **three** steps of a mail merge process?

**1.** .....  
.....  
**2.** .....  
.....  
**3.** .....  
.....

[3]

**Question 7 (14 Marks)**

XYZ Hardware Company has two offices, one in Port Louis and one in Dubai. The company has decided to use a VPN to connect the two offices.

(a) (i) What does the acronym **VPN** stand for?

..... [1]

(ii) Give **one** reason why the company is using a VPN.

.....  
..... [1]

(b) Give **three** network components for the proposed VPN.

- 1. ....
- 2. ....
- 3. .... [3]

(c) The company decides to use a star topology for its branch in Port Louis.

(i) Draw a **labelled diagram** of a star topology.

[3]

(ii) Give **one** disadvantage of using a star topology.

.....

.....

[1]

(d) The company decides to create a website.  
Use the HTML codes below to show what will be displayed on the Homepage below.

```
<html>  
<head>  
<title>HOMEPAGE</title>  
</head>  
  
<body>  
  
<p>XYZ HARDWARE COMPANY</p>  
<p> We are at your service</p>  
  
</body>  
</html>
```



[3]

(e) Employees of the company should avoid plagiarism.

State **two** ways to avoid plagiarism.

1. ....  
.....

2. ....  
.....

[2]



**Question 8 (10 Marks)**

A spare parts shop uses Microsoft Excel to record the following information.

|   | A                           | B                        | C                        | D                         | E                  | F                   |
|---|-----------------------------|--------------------------|--------------------------|---------------------------|--------------------|---------------------|
| 1 | <b>XYZ SPARE PARTS SHOP</b> |                          |                          |                           |                    |                     |
| 2 | <b>Part Number</b>          | <b>Quantity in Stock</b> | <b>Buying Price (Rs)</b> | <b>Selling Price (Rs)</b> | <b>Profit (Rs)</b> | <b>Availability</b> |
| 3 | 3875489C                    | 6                        | 7500                     | 9850                      | 2350               | Yes                 |
| 4 | 1256376S                    | 0                        | 1200                     | 2500                      |                    | No                  |
| 5 | 4632562F                    | 9                        | 5200                     | 7500                      |                    | Yes                 |
| 6 | 1567595A                    | 0                        | 1800                     | 2400                      |                    | No                  |
| 7 | 2359187B                    | 5                        | 2250                     | 3000                      |                    | Yes                 |
| 8 |                             |                          |                          |                           |                    |                     |

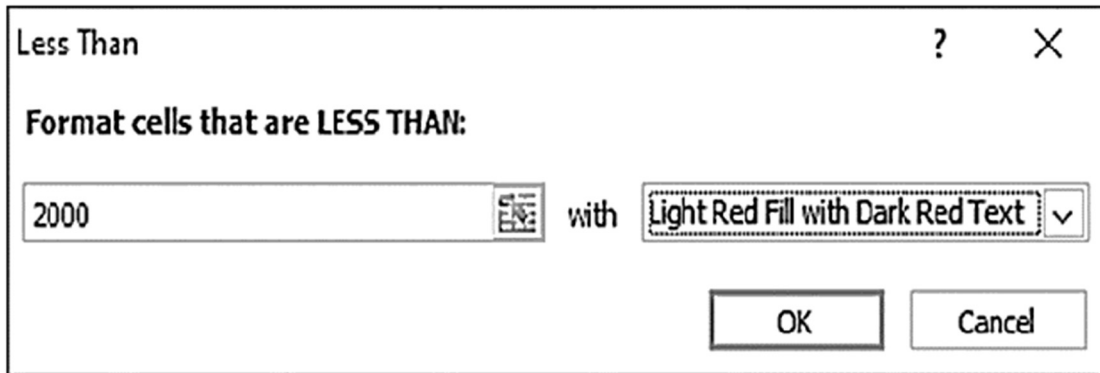
(a) Write down **one** cell address that has **Wrap Text** applied to it.

..... [1]

(b) Write down the formula that has been used to calculate the profit in cell **E3**.

..... [2]

(c) A conditional formatting rule is applied to cell range C3:C7 below.



Write down the **two cell addresses** that will be formatted.

..... [2]

(d) Write down **a formula** to display the number of different types of spare parts (Part Number) recorded for sales in the shop.

..... [2]

(e) Write down **a formula** to display the number of spare parts that are not available in stock.

..... [3]

**Question 9 (11 Marks)**

(a) A flowchart to add a new member to a library database works as follows:

- Input member's ID
- Check if ID exists
- If ID exists, display "Member already exists!"
- End the 'add new member' process
- Else input member details
- Save member record in the library database
- End the 'add new member' process

Draw the flowchart for the above scenario.

**[6]**

(b) What do you understand by the term **dry run**?

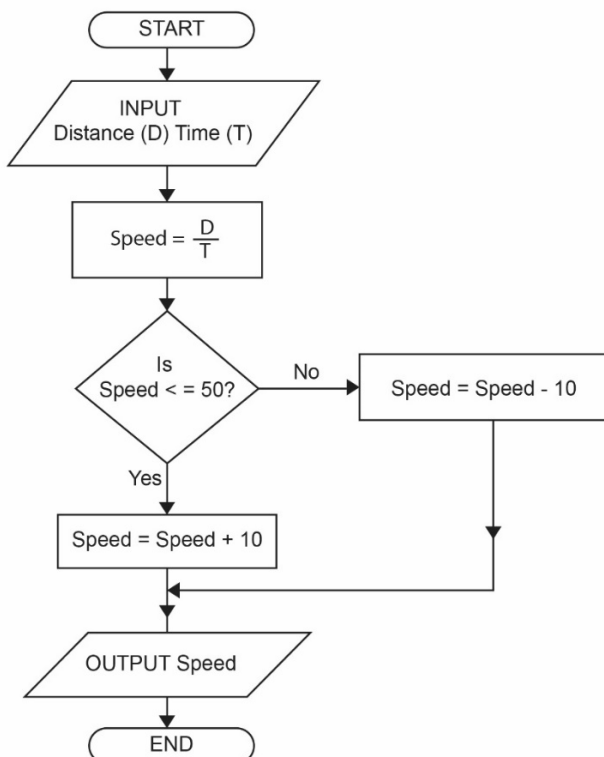
.....

.....

.....

[2]

(c) Study the flowchart below carefully.



State the output for each of the values input for D and T.

| INPUT |    | OUTPUT |
|-------|----|--------|
| D     | T  | Speed  |
| 480   | 10 |        |
| 1000  | 20 |        |
| 4800  | 60 |        |

[3]

- END OF PAPER -