



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

**MAURITIUS
EXAMINATIONS
SYNDICATE**

NATIONAL CERTIFICATE OF EDUCATION

INFORMATION AND COMMUNICATIONS TECHNOLOGY

Specimen paper
for first assessment in October 2020

Acknowledgement

The MES would like to place on record its gratitude and appreciation to all those who contributed to the development of the Specimen Assessment Materials - the Educators (from the mainstream and extended stream), academics from the MIE, the University of Mauritius and the Open University, representatives of the Ministry of Education and HR, TE and SR and representatives of recognized unions - who, at different stages in the development of the assessment, have been members of technical committees, Secondary School Examination Committees and validation committees that were set up by the MES. The contribution of all these stakeholders provided us with vital information and feedback which fed into the production of the specimen papers.

1. Background

At the end of the Nine-Year-Continuous-Basic-Education (NYCBE) cycle, all students from the Regular and Extended programmes take the National Certificate of Education (NCE) Assessment. This assessment is in line with the philosophy defined in the National Curriculum Framework (NCF) Grades 7, 8 and 9 (MIE, 2016) and the learning outcomes detailed in the Teaching and Learning Syllabus (MIE, 2017).

The assessment will be carried out in the following subjects:

- English
- Mathematics
- French
- Science
- Information and Communication Technology
- Technology Studies
- Business and Entrepreneurship Education (BEE)
- Social and Modern Studies (SMS)
- Art and Design
- An optional core subject (Asian Languages, Arabic and Kreol Morisien, if chosen by the candidate)

A 7-point Grading structure will be used in each subject, as illustrated below:

Numerical Grade	Marks
1	85 and above
2	75 and above but below 85
3	65 and above but below 75
4	55 and above but below 65
5	45 and above but below 55
6	35 and above but below 45
7	Less than 35

2. Purpose of the NCE Assessment

The main purpose of the NCE Assessment is to measure and certify learning that has taken place at the end of the NYCBE cycle. The information gathered from the assessment will be used for

- **Certification**

Meeting the minimum requirements on the NCE assessment (see the Award Rules in the Annual Programme) will lead to the candidate being conferred an NCE certificate which will be recognised at Level 2 on the National Qualifications Framework.

- **Promotion to Grade 10**

Assessment results from the NCE will guide schools in determining whether students get promoted to Grade 10.

- **Orientation**

The NCE assessment will provide information to guide students as to whether they want to continue in the general or in the technical/vocational stream. Within the general stream, it may guide students in their choice of subjects as from Grade 10.

- **Admission to academies**

Performance in the NCE Assessment will determine whether candidates are admitted to academies. The following extract from the Education Act indicates the criteria for admission to academies:

Priority of admission to Grade 10 in an Academy shall be determined on the basis of the grade aggregate and the relative performance of the eligible pupil in the best 8 core subjects, including English, French and Mathematics, at the NCE assessment and the choice of the responsible party specified in paragraph...

3. Guiding principles in Assessment

A number of key principles of assessment guided the development of the NCE assessment.

I. Validity

Validity is a central concept in assessment. In simple terms, it refers to the extent to which an assessment measures what it is supposed to be measuring. Validity also refers to the

extent to which the assessment is providing evidence of candidates' achievement levels. An assessment is considered valid if it meets its purposes.

II. Reliability

Reliability, another crucial concept in assessment, refers to producing reliable, stable and consistent results over time. Ensuring reliability requires clear and consistent processes for the setting, marking and grading of the NCE assessment.

III. Impact

The NCE Assessment aims at having positive effects on teaching and learning with positive washback into the curriculum and into the educational system. An important consideration during the development of this assessment was the potential impact that it would have on the life chances of candidates, allowing for maximum inclusion and retention of students in the system while maintaining standards.

IV. Fairness

Needs and characteristics of learners were considered in the design of the NCE assessment so as not to disadvantage any group or individual. Care has been taken to minimise cultural and gender biases and to accommodate the different abilities and the social, cultural and linguistic backgrounds of candidates.

4. Designing the NCE ICT Assessment – The key questions.

On top of the fundamental assessment considerations spelt out in the previous paragraph, the following key questions underpinned the design of the NCE Assessment for ICT.



(Source: Cambridge Assessment)

4.1 What will be assessed and how?

The NCE assessment in ICT will assess candidates' ICT skills and competencies, in terms of the knowledge and understanding they have acquired through lab-based tasks and the skills they have developed at the end of the Grade 9.

The table below gives a breakdown of the weighting allocated to the different learning areas.

Learning Area	Weighting
Knowledge and Comprehension	50%
Application	30%
Analysis	20%

4.2 How will the assessment be beneficial for learners?

The NCE assessment in ICT aims at being beneficial to learners in different ways. Firstly, it will encourage the teaching and learning of the key competencies and skills in ICT. It will also provide feedback to learners and stakeholders in general about the overall proficiency level achieved. By assessing information literacy, media literacy and technology literacy, it aims at helping them develop their capacity to solve problems in digital environments. It also provides a firm grounding in ICT as students' progress through the system, whether they wish to continue to the academic stream or move to the technical/vocational stream.

4.3 Population of Candidates

The paper has been designed bearing in mind the profile of candidates who will be taking the NCE assessment. While aiming at maintaining the standard required for a Grade 9 paper, the paper also gives sufficient opportunities to students from all ability groups to work through. At the higher-end the paper also contains some items which would stretch the ability of candidates and where they will be able to show their mastery of ICT skills at Grade 9 level.

5. Paper Design

The National Certificate of Education (NCE) Assessment has been designed in line with the goals and objectives of the National Curriculum Framework (NCF) for Grades 7, 8 and 9. The design and format of the Information and Communications Technology (ICT) Question Paper aim at aligning the assessment objectives in the assessment syllabus with the aims and objectives of the NCF and the learning outcomes in the Teaching and Learning Syllabus. They also seek to enhance the pedagogical experience students would derive from the assessment. It is important to highlight that the ICT curriculum is **spiral** in nature. It lays the basis for using ICT for the development of learning skills, literacy skills, and life skills progressively from Grade 7 to Grade 9.

6. Aims of the Assessment

Assessment of learners' achievement in ICT will be based on the **Expected Learning Outcomes** stated in the **National Curriculum Framework (NCF)** Grades 7, 8 & 9 and detailed in the **ICT: Teaching and Learning Syllabus** Grades 7, 8 & 9. In line with the **9 Content Areas** for ICT defined in the National Curriculum Framework Grades 7 to 9 – Computer Operations and Fundamentals; Word Processing; Spreadsheet; Database; Presentation; Internet; Multimedia; Health, Safety and Ethics; Practical problem solving and Programming, learners should be able to:

- show an understanding of Software including operating system and utility programs and Hardware;

- create, edit and format a word processed document that can be adapted for different recipients;
- handle information using features, formulae and functions of spreadsheet;
- create a presentation using different features;
- show understanding of the different types of networks and network topologies;
- use Internet features and tools to create a website, communicate, share, and collaborate;
- use an appropriate authoring tool to create comic strips and animated clips;
- demonstrate an understanding of social, legal, ethical and economic issues relevant to ICT;
- show understanding of health and safety issues related to the use of ICT equipment;
- plan, develop, test and modify sets of instructions for a given data model
- demonstrate an understanding of a database and create queries, forms and reports

7. Assessment Objectives

Candidates will be assessed according to **three** Assessment Objectives (AOs). These are:

- **AO1: Knowledge & Comprehension**
- **AO2: Application**
- **AO3: Analysis**

Under **AO1**, candidates will be assessed on their ability to:

- recall literacy related to media, network and technology;
- outline and discuss the use of ICT hardware and software;
- recognise the importance of health, safety and ethics in ICT;
- explore the use of the Internet and Multimedia;
- show an understanding of basic instructions to perform a simple task.

Under **AO2**, candidates will be assessed on their ability to:

- apply knowledge and understanding of facts, terms and concepts with respect to a particular hardware and software;
- propose network components for a particular network;
- show an understanding of how web tools can be used for e-discussion;
- develop a plan for creating comic strips and animated clips;
- write computer programs for simple problem.

Under **AO3**, candidates will be assessed on their ability to:

- make judgement and formulate appropriate strategies in problem solving; use advanced features for application software;
- compare the different types of network and topologies;
- analyse, test and modify sets of instructions for a given data model.

8. Paper Design

Subject : **Information and Communication Technology**

Class : **Grade 9**

Time : **1 Hour 45 Minutes**

Marks : **100**

I.	Weighting to Objectives:								
	Objectives	Knowledge		Application			Analysis		Total
	Percentage of marks:	50		30			20		100
	Marks	50		30			20		100
II.	Weighting to Format of Questions:								
	Format of Questions	MCQ	MAT/LB	FITB	T/F	VSA	SAT	OE	Total
	No. of Questions	1	1	1	1	3	3	1	11
	Marks Allocated	15	10	10	10	18	28	9	100
III.	Estimated Time	15	7	8	10	20	30	15	105
IV.	Weighting to Content:								
	Units/Sub-units		Marks						
1.	Computer Operations and Fundamentals		17						
2.	Word Processing		13						
3.	Spreadsheet		13						
4.	Presentation		6						
5.	Internet		14						
6.	Multimedia		7						
7.	Health, Safety and Ethics		8						
8.	Practical problem solving and programming		14						
9.	Database		8						
	Total:		100						
V.	Estimated Difficulty Level:	Basic	55 %				Knowledge	50 %	
		Intermediate	30 %				Application	30 %	
		Proficient	15 %				Analysis	20 %	

Abbreviations: K (Knowledge), C (Comprehension), A (Applying), An (Analysing) MCQ (Multiple Choice Question), MAT (Matching), LB (Labelling) FITB (Fill in the blank), T/F (True/False), SAT (Short Answer type), VSA (Very Short Answer type), OE (Open Ended)

9. Blueprint

Based on the above framework, the Specimen Paper has been developed using a blueprint. The blueprint is annexed to this document. It gives useful information to enable teachers to understand that a question paper is based on a sample of learning outcomes and that different question formats may be used to assess learning outcomes at different levels.

BLUE PRINT – Types of Questions

Subject: Information and Communication Technology

Class: Grade 9

Maximum Marks: 100

Time: 1 Hour 45 Minutes

S.No	Objectives Form of Questions Units/sub Units	Knowledge and Comprehension						Application			Analysis			Total
		MCQ	FITB	T/F	MAT/LB	VSA	OE	VSA	SAT	OE	VSA	SAT	OE	
1.	Computer Operations and Fundamentals	3(3)	2(2)	1(1)	2(2)	5(1)		2(1)				2(1)		17
2.	Word Processing	2(2)	1(1)	2(2)				1(1)	2(1)	2(1)		3(1)		13
3.	Spreadsheet	2(2)	1(1)	2(2)				2(2)	2(1)			4(2)		13
4.	Presentation	1(1)	1(1)	1(1)	1(1)			1(1)						6
5.	Internet	3(3)	1(1)	1(1)	4(2)			2(1)		2(1)		1(1)		14
6.	Multimedia	1(1)	1(1)	1(1)	1(1)			1(1)	2(1)					7
7.	Health, Safety and Ethics	1(1)	1(1)		2(2)							2(1)		8
8.	Practical problem solving and programming	1(1)	1(1)	1(1)								5(1)	3(1)	14
9.	Database	1(1)	1(1)	1(1)				2(2)	1(1)	2(1)				8
	Sub Total	15	10	10	10	5		12	7	11	3	14	3	100
	Total				50				30			20		100

Note: Figures within brackets indicate the number of questions and figures outside the brackets indicate total marks.

*Denotes that marks have been combined to form one question.

Summary:

- Number of questions 15 Marks
- MCQ (Multiple Choice Question) 10 Marks
- MAT (Matching) and Labelling (LB) 10 Marks
- FITB (Fill in the blank) 10 Marks
- T/F (True/False) 10 Marks
- VSA (Very Short Answer) 18 Marks
- SAT (Short Answer type) 28 Marks
- OE (Open Ended) 9 Marks

Topic/Content	Question Number	Learning Outcomes (Syllabus)	Page No in Textbook Grade 9	NCE – Information and Communication Technology (ICT)										Total							
				AO1: Knowledge with Understanding			AO2: Application			AO3: Analysis											
				Basic	Intermediate	Proficient	Basic	Intermediate	Proficient	Basic	Intermediate	Proficient									
Computer Operations and Fundamentals	1(v)	G9 – 1.3	Ext Pg 22	1																	
	1(vii)	G7 – 1.6	G7 – Pg 33	1																	
	1(xiv)	G7 – 1.6	G7 - Pg 34		1																
	2(b)	G7 – 1.6	Ext Pg 25		1																
	2(c)	G9 – 1.3	Ext Pg 23																		
	3(d)	G8 – 2.1	Ext Pg 6																		
	4(a)(iii)	G9 – 1.2	G9 - Pg 5																		
	4(b)(iv)	G8 – 2.1	Ext Pg 7																		
	5(a)	G9 – 1.3	Ext Pg 23																		
	5(b)	G7 – 1.6	G7 - Pg 34																		
	6(a)(i)	G9 – 1.1	G9 - Pg 1																		
	6(a)(ii)	G7 – 1.4	G7 - Pg 39																		
	6(a)(iii)	G9 – 1.2	G9 - Pg 2																		
	Word Processing	1(i)	G7 – 1.6	G7 - Pg 34																	
1(xi)		G8 – 2.2	G7 - Pg 81																		
2(d)		G8 – 2.2	Ext Pg 54																		
3(b)		G9 – 2.3	G9 - Pg 21																		
3(i)		G8 – 2.1	Ext Pg 49																		
6(b)(i)		G8 – 2.3	G8 – Pg 29																		
6(b)(ii)		G7 – 2.1	G7/G8 Practical																		
6(b)(iii)		G9 – 2.1	G9 - Pg 28																		
Spreadsheet	1(iii)	G7 – 3.1	Ext Pg 77																		
	1(xii)	G7 – 3.1	Ext Pg 71																		
	2(e)	G7 – 3.1	Ext Pg 72																		
	3(f)	G8 – 4.1	Ext Pg 73																		
	3(k)	G7 – 3.1	Ext Pg 65																		
	9(a)	G8 – 3.1	G7/G8 Practical																		
	9(b)	G9 – 3.1	G9 - Pg 51																		
	9(c)	G7 – 3.1	Ext Pg 69																		
	9(d)	G9 – 3.1	G9 - Pg 54																		
	9(e)	G9 – 3.1	G9 - Pg 54																		
	1(vi)	G9 – 4.2	Ext Pg 92																		
	2(f)	G7 – 4.2	Ext Pg 82																		
	3(g)	G7 – 4.2	G7 - 108																		
Presentation	4(b)(iv)	G8 – 3.2	Ext Pg 102																		
	7(c)	G7 – 4.2	G7 - 110																		

Internet	1(ii)	G9 - 5.2	Ext Pg 118	1																
	1(x)	G9 - 5.6	Ext Pg 109					1												
	1(xv)	G9 - 5.4	Ext Pg 106	1																
	2(g)	G7 - 5.1	Ext Pg 106	1																
	3(c)	G9 - 5.2	G9 - 105	1																
	4(a)(ii)	G7 - 5.7	Ext Pg 105	1																
	4(b)(i)	G7 - 5.7	G9 - 108	1																
	4(b)(ii)	G9 - 5.2	Ext Pg 108	1																
	4(b)(v)	G9 - 5.2	G9 - 108	1																
	8(c)(i)	G9 - 5.9	G9 - 115								1									
	8(c)(ii)	G9 - 5.9	G9 - 115																	
	8(c)(iii)	G9 - 5.5	G9 - 110																	
	8(d)	G9 - 5.4	Ext Pg 112						2											
	1(x)	G9 - 6.1	G9 - 143	1																
	2(a)	G9 - 6.1	G9 - 149	1																
	3(e)	G8 - 6.3	G9 - 144	1																
4(a)(v)	G7 - 6.1	G7 - 123	1																	
7(a)	G9 - 6.1	G9 - 145				1														
7(b)	G9 - 6.2	G9 - 145						2												
1(viii)	G9 - 7.2	G9 - 161	1																	
2(h)	G9 - 7.5	Ext Pg 124	1																	
4(a)(iv)	G9 - 7.2	Ext Pg 143	1																	
4(a)(vi)	G8 - 7.1	Ext Pg 135	1																	
8(a)	G9 - 7.5	Ext Pg 122						2												
8(b)	G9 - 7.7	G9 - 168																		
1(iv)	G8 - 8.2	Ext Pg 149	1																	
2(i)	G8 - 8.2	Ext Pg 124	1																	
3(h)	G9 - 8.3	Ext Pg 156	1																	
11(a)	G9 - 8.2	Ext Pg 157																		
11(b)	G9 - 8.3	G9 - 179																		
11(c)	G9 - 8.1	G9 - 184								3										
1(xiii)	G8 - 9.2	G8 - 163	1																	
2(i)	G8 - 9.2	G8 - 162	1																	
3(j)	G8 - 9.1	G8 - 162	1																	
10(a)	G8 - 9.1	G8 - 162								1										
10(b)(i)	G8 - 9.1	G8 - 162																		
10(b)(ii)	G8 - 9.1	G8 - 163																		
10(b)(i)	G9 - 9.1	G9 - 216																		
Total marks				43	7	50														
Total of the AOs						50														
% of each AO						50														

Basic: 55 %
 Intermediate: 30 %
 Proficient: 15 %

10. The Paper Description

The ICT specimen question paper will be of a duration of **1 hour 45 minutes** and will carry a total of **100 marks**. It consists of two sections, Section A and Section B, which comprise of 11 questions related to the 9 content areas. Section A is related to assessing the knowledge of the students and has a weightage of 50% while Section B assesses students' application and analysis skills. They will be required to answer **all** the questions and to write their answers on the question paper. The questions will be in the form of Multiple-Choice Question, Matching, Fill in the blank, True/False, Labelling, Very Short Answer type, Short Answer type and Open Ended.

The question paper is design as follows:

Section A comprising of the following questions:

- **Question 1:** This question will assess all content areas through knowledge and comprehension. It also tests the higher order thinking skills. (15 marks)
- **Questions 2, 3 and 4:** These questions will assess knowledge of basic ICT skills and competencies, in terms of the knowledge and understanding they have acquired through lab-based tasks and theory. Fill-in-the blanks, True/False, Matching and Labelling may all be set to elicit the right kind of information from candidates. (30 marks)
- **Question 5:** This question will assess the knowledge of the students in relation to VSA type questions on topics related to computer operations and office packages. (5 marks)

Section B comprising of the following questions:

- **Question 6:** This question will assess candidates' knowledge on computer operations and fundamentals and word processing at an intermediate level. It will assess candidate's ability to use mail merge to produce multiple copies of the same document to fit the needs of multiple recipients in a fictitious or real context and discuss the functions of an operating system. (12 marks)
- **Question 7:** Candidates will be required to develop a plan for creating comic strip and understand the different features of presentation software. (5 marks)
- **Question 8:** This question will assess candidates' knowledge and ability to apply health and safety rules. Candidates will have to analyse the dangers of Internet and understand HTML codes. They will be assessed on their ability to differentiate between Internet and Intranet. (9 marks)
- **Question 9:** This question will assess candidates' ability to apply advanced formatting features and function in spreadsheet. Candidates are required to create queries and apply design templates in their presentation. (8 marks)

- **Question 10:** This question will assess candidates' knowledge and ability to handle information and query a database.
- **Question 11:** This task will be an open-ended question. Candidates will be required to dry run a flowchart and write a computer program for a simple problem. This question will assess candidates' ability in problem solving and computational thinking skills. (11 marks)

Boxes have been inserted for each question or sub-question in the specimen paper to indicate the Assessment Objective (AO), the unit and the Learning Outcomes (LO) which are found in the Teaching & Learning Syllabus. The format of the question paper is not fixed. The type and level of questions will vary. The specimen paper provides only model questions. The specimen mark scheme provides model answers and examples to give guidance on the assessor's expectations and standards/benchmarks to be achieved.



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Que l'esprit gère le corps*

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Index Number:

NATIONAL CERTIFICATE OF EDUCATION

Specimen paper for first assessment in October 2020

INFORMATION AND COMMUNICATIONS TECHNOLOGY (N540)

TIME: 1 HOURS 45 MINUTES

READ THESE INSTRUCTIONS FIRST

1. Write your Index Number in the space provided above.
2. Write in dark blue or black ink.
3. Answer all questions.
4. All answers must be written in the spaces provided.
5. You may use a soft pencil for any diagrams, graphs or rough working.
6. Any rough working should be done in this booklet.
7. Do not use correction fluid.
8. Calculators are not allowed.
9. The total of the marks for this paper is **100**.
The number of marks is given in brackets [] for each question or part question.
10. Check that this assessment booklet consists of **11** questions printed on **17** pages from pages **2** to **18**.
11. Any discrepancy in the document must be immediately notified to the invigilator.

Section A

Question 1 [15 Marks]

For each of the questions (i) to (xv) below, four options (A, B, C and D) are given. Choose and **circle the correct one**. Only one **option** is correct in each question.

(i) Which software is commonly used to type a letter?



Database

A



MS Paint

B



Word
Processing

C



Publisher

D

(ii) Which of the following is an example of a wireless network?

A ISP

B Wi-fi

C NIC

D Wiki

(iii) With which sign do spreadsheet formulas always start?

A +

B -

C =

D /

(iv) Which symbol represents a **process** in a flowchart?



A



B



C

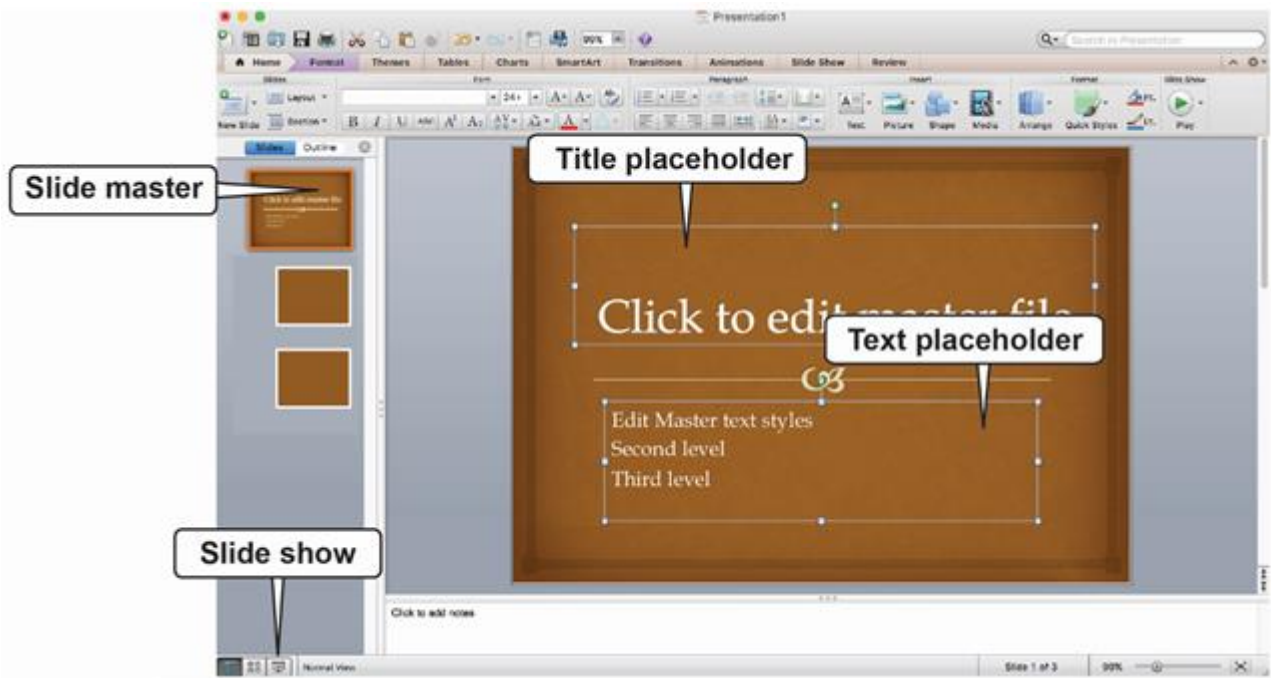


D

(v) **Troubleshooting** is the process of

- A editing a document
- B resolving a problem
- C booting a computer
- D performing a calculation

(vi) Referring to the figure below, which of the following allows you to **modify** the **slides** and the **slide layouts** of your presentation?



- A Slide Master
- B Slide Show
- C Title Placeholder
- D Text Placeholder

(vii) Which one of the following software controls the computer hardware and enables the application software to run?



A

B

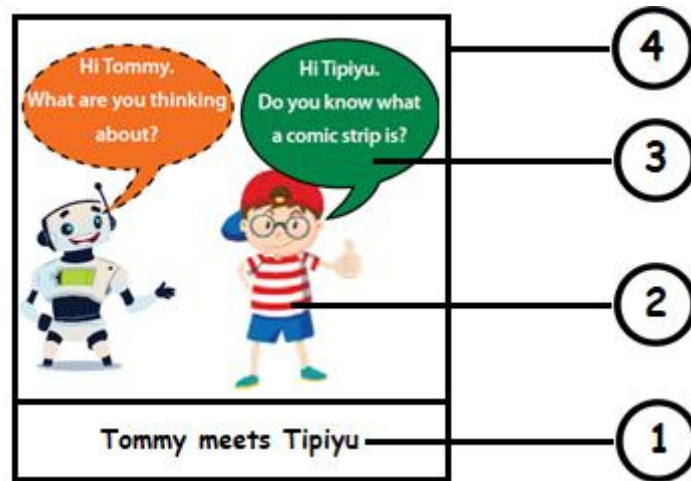
C

D

(viii) What is represented by the © symbol?

- A country
- B computer
- C copyright
- D correct

(ix) Which number represents the panel in the comic strip below?



- A. 4
- B. 3
- C. 2
- D. 1

(x) Which one of the web tools below can be used to send and receive messages through the Internet?



A



B



C



WIKI

D

(xi) Which one of the following is a feature of word processing software?

	A	B
1	Product	Price
2	Pencil	10
3	Book	100
4	Ruler	15
5	Bag	550
6		
7	Total	675

Calculation

A

	N
	77,8
	10,3
	11,2
	35,0
	=SUM(N1:N4)

Function

B

frmEmployees
Employees and Orders

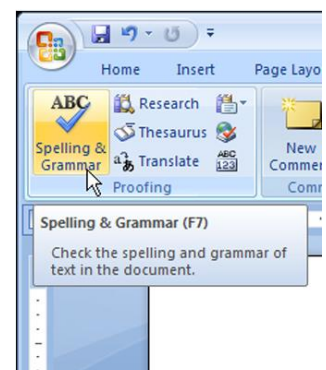
Last Name: Freehafer
 First Name: Nancy
 E-mail Address: nancy@northwindtraders.com
 Job Title: Sales Representative

Orders

Customer	Order Date	Shipped Date
Company G	3/24/2006	
Company J	3/24/2006	4/7/2006
Company K	3/24/2006	
Company A	3/24/2006	

Create form

C



Spell Checker

D

(xii) To find the **highest value** from a range of cells, which function must be used?

- A** AVG
- B** MAX
- C** SUM
- D** MIN

(xiii) A teacher stores test results in a database as shown below.

SID	Surname	FirstName	Marks
S001	Makaran	Xia	75
S002	Subrun	Lovish	55
S003	Anwar	Owaish	60
S004	Dasyn	Pamela	80

Which field uses data type **Number**?

- A** SID
- B** Surname
- C** FirstName
- D** Marks

(xiv) How many bits does 1 kilobyte contain?

- A $1024 + 8$
- B 1024×8
- C 1024×1024
- D $1024 \div 8$

(xv) Which device is used to protect a computer from hackers?



Router

A



Firewall

B



Cable

C





Network Interface
Card

D

Question 2 [10 Marks]

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

record	new	watermark	field	storyboard	eyestrain
freezes	network	multiplication	decision	utility	sorting

- a) A _____ can be used to show the sequence of actions in a comic strip.
- b) A disk defragmenter is an example of a _____ software.
- c) If a laptop _____, remove the battery to force it to turn off.
- d) A pale text that appears behind the content of a document as shown in the figure is called _____.
- 
- e) The _____ option in spreadsheet allows you to re-arrange data in a specific order.
- f) In a presentation software, the icon  represents a _____ slide.
- g) A _____ is a set of computers connected together for the purpose of sharing information.
- h) Exposure to computers for long hours can cause _____.
- i) The _____ box has one incoming flowline but two outgoing flowlines.
- j) In the table below, a _____ is a heading which groups similar data.

EmpID	Name	Age	Salary
1	Ravi	38	50 000
2	Rajesh	42	30 000
3	Ronald	26	20 000

Question 3 [10 Marks]

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

		True	False
a)	External hardware components are called peripheral devices.	✓	
b)	A table of contents can be automatically generated in Word Processing.		
c)	An Internet Service Provider is used to search for information on the Internet.		
d)	A scanner is used to print a document.		
e)	A caption allows you to write the story.		
f)	Filtering means to view specific rows from a table.		
g)	A Slide Show plays the slides in a presentation.		
h)	A sequence indicates a condition.		
i)	Format Painter is used to set page margin.		
j)	A database file can have many tables.		
k)	A column is identified as a number in spreadsheet.		

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.

Column A	
(i)	Template
(ii)	Web Browser
(iii)	Multi-tasking
(iv)	Video Conferencing
(v)	Windows Movie Maker
(vi)	Password

Column B	
1	is a secret key.
2	allows users to run more than one task at a time.
3	is a predesigned document we can use to create documents quickly.
4	is use to create animated clips.
5	allows us to view web pages.
6	is the collection of all webpages on the Internet.
7	Allows people from different locations to communicate

(i)	(ii)	(iii)	(iv)	(v)	(vi)
3					

[5]

b) Label the pictures with the words given below.

URL Output Device WAN Themes Input Device LAN

(i)



(iii)



(v)



(ii)

<https://www.youtube.com>

(iv)



[5]

Question 5 [5 Marks]

a) The diagram below shows a computer monitor in **sleep mode**.



Give 2 ways to '**wake up**' the computer monitor.

1. _____

2. _____ [2]

b) A student uses the following different software:



Search Engine



Spreadsheet



Word processing



Presentation

Name the **software** that will help the student to carry out the following tasks:

Feature

(i)	Manage his/her monthly expenses.	
(ii)	Replace a word by another word in an essay.	
(iii)	Find information on the Internet.	

[3]


Section B

Question 6 [12 Marks]

a) A screenshot of Mike's computer settings is shown below.

View basic information about your computer

Windows edition
Windows 10 Pro
© 2018 Microsoft Corporation. All rights reserved



System

Processor:	Intel(R) Core (TM) i5-7500 CPU © 3.40 GHz
Installed memory (RAM):	8.00 GB
System type:	64-bit Operating System, x64-based processor

(i) What is the name of the operating system installed on his computer?

_____ [1]

(ii) What is the speed of the CPU? _____ [1]

(iii) State any **two** functions of an operating system.

Function 1: _____

Function 2: _____

_____ [2]

b) Mike is the manager of a sports club. He needs to send the same letter to different team members.

(i) **Circle** the **button** (**icon**) which he can use to create a table:



[1]

(ii) Explain how Mike can avoid **typing the same word** several times when using a word processor.

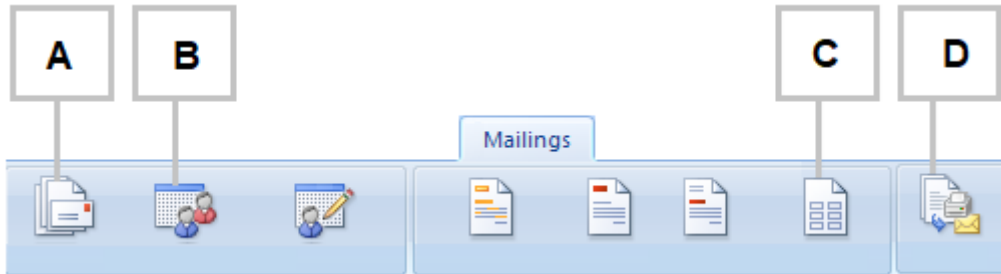
_____ [2]

The **mail merge** feature can be used to send letters.

(iii) State **one** advantage of using mail merge.

[2]

(iv) Using the toolbar (ribbon) shown below, answer the following questions:

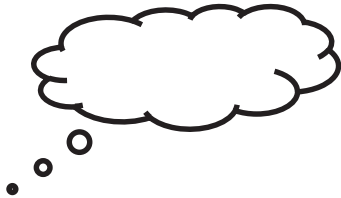


1. Which button is used to insert the fields? _____
2. Which button is used to complete the mail merge? _____
3. Which button is used to choose the list of teams? _____

[3]

Question 7 [5 Marks]

a) Jane intends to create a comic strip. Name the type of bubble shown below in a comic strip.



Answer: _____

[1]

b) Arrange the following steps in the correct order to create a comic strip. The first one has been done for you.

Steps	Correct Order
Draw the panels	
Add in the speech and lettering	
Write your ideas for your comic	1
Use basic shapes to draw	

[2]

- c) Jane uses a presentation software. Use the terms **Transition** and **Animation** to fill the table below to correspond to the statements given.

	STATEMENT	TERM
1	An item on the slide that performs an action when clicked.	
2	Motion effects of slides during slide show	

[2]

Question 8 [9 Marks]

A call centre employs operators who work from 9 a.m. to 5 p.m.

- a) State two precautions that can be taken to minimise **back pain** when using computers.

Precaution 1: _____

Precaution 2: _____

[2]

- b) The company provides Internet facilities. Recently the employees have complained about receiving unsolicited emails.

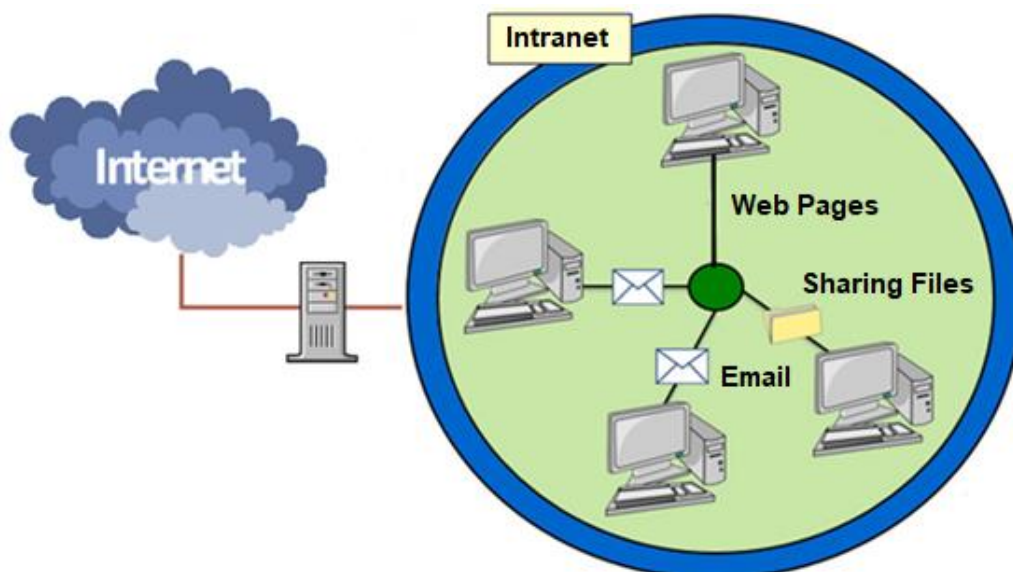
Give any **two** potential dangers of receiving unsolicited emails.

Danger 1: _____

Danger 2: _____

[2]

- c) The company decides to set up an Intranet as shown below.



(i) Define Intranet.

[1]

(ii) Give one use of Intranet.

[1]

(iii) Identify a network component that allows the Intranet to connect to the Internet.

[1]

d) The company wishes to have its own website. Websites are created using HTML. Complete the HTML codes to generate the corresponding display.

HTML Code	Display
<pre><html> <body> <h1>This is <i>.....</i> heading</h1> <.....> </html></pre>	<p>This is <i>italic</i> heading</p>

[2]

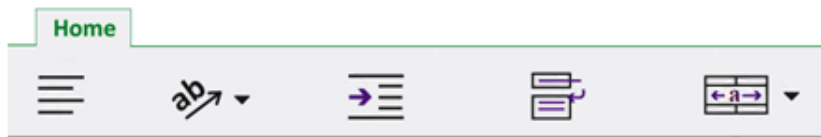
Question 9 [8 Marks]

A car dealer has several cars in his showroom.

He uses Microsoft Excel to record the following information about his cars.

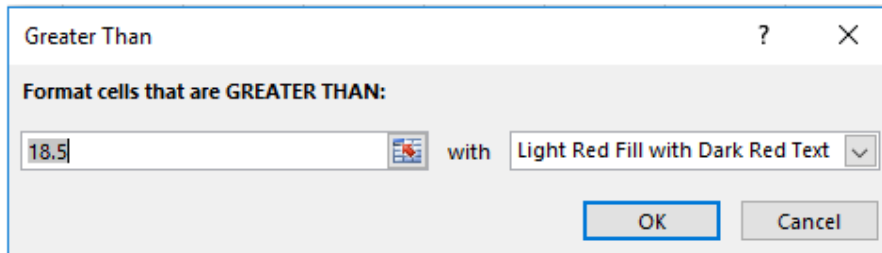
	A	B	C	D	E
1	MyCars Showroom				
2					
3	Car	Distance (KM)	FUEL used (Litres)	CONSUMPTION (KM per Litre)	Gift
4	Car1	48	4.0	12	Yes
5	Car2	160	9.0	17.8	
6	Car3	70	4.5	15.6	
7	Car4	200	20.0	10	
8	Car5	150	33.0	4.5	
9	Car6	300	15.0	20	
10					

- a) **Circle** the tool that should be used to **merge and centre** the title in row 1 from the options given below.



[1]

- b) After applying the conditional formatting rule in cell C4:C9 below, name a cell that will be formatted.



Cell: _____

[1]

- c) Write down the formula that should be used in cell **D4** to calculate the **CONSUMPTION (KM per Litre)** for Car 1.

Formula: _____

[2]

- d) A gift is to be given to the car having a **CONSUMPTION (KM per Litre)** of at least 12. If a car gets a gift, then **YES** should appear, otherwise **NO** in column E.

Using the **IF statement**, write a function in cell E4.

_____ [2]

- e) Using the **COUNTIF function**, write a formula to find how many cars will receive the gift.

_____ [2]

Question 10 [5 Marks]

A database, MARKS, was set up to record the test results for a class of students. Part of the database is shown below.

Student_Name	Class_ID	Maths	English	Science
Diana Abur	0001	92	88	95
Ravi Gupta	0009	29	34	38
Chin Hwee	0010	43	47	50
John Jones	0013	37	67	21
Paul Smith	0017	70	55	65

a) How many **records** are shown in the table?

_____ [1]

b) (i) State which field you would choose as the primary key.

_____ [1]

(ii) Give a reason for choosing this field.

_____ [1]

c) The query-by-example grid below selects all students with more than 60 marks in Science.

Field :	Student Name	Science
Table :	Marks	Marks
Sort :	Ascending	
Show :	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria :		>60
or :		

Show what would be the output.

_____ [2]

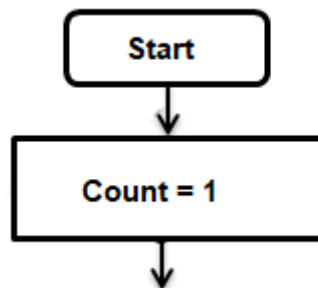
Question 11 [11 Marks]

a) The formula used to convert temperature from Fahrenheit (F) to Celsius (C) is:

$$C = (F - 32) \times 0.56$$

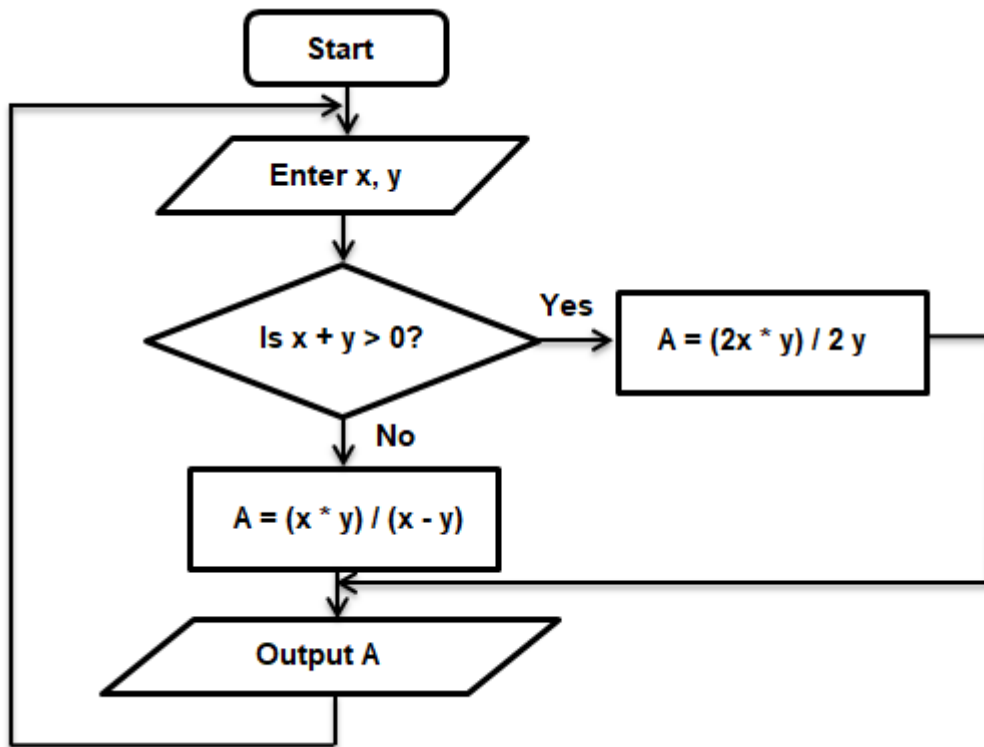
Complete the flowchart below to convert 5 temperature readings from Fahrenheit to Celsius using the statements given below.

- Increase Count by 1
- Input Temperature
- Celsius (c) = (Fahrenheit (F) – 32) x 0.56
- End
- Count > 5?
- Display Celsius



[5]

b) Study the flowchart below carefully.

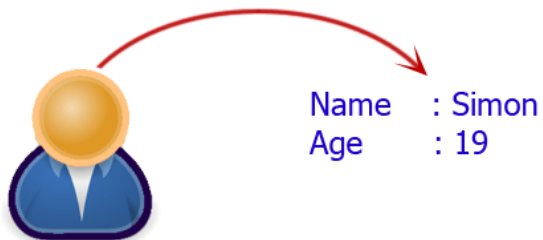


Given the inputs x and y , state what outputs will be displayed in the table below.

INPUT		OUTPUT
x	y	A
2	3	
4	-4	
-5	6	

[3]

c) Write a Python program to display the details of the student below.



[3]



MARK SCHEME

INFORMATION AND COMMUNICATIONS TECHNOLOGY

Specimen paper Mark scheme
for first assessment in October 2020

Section A

Question 1	1 Mark for each correct answer	[15 Marks]
(i)	C	1
(ii)	B	1
(iii)	C	1
(iv)	A	1
(v)	B	1
(vi)	A	1
(vii)	A	1
(viii)	C	1
(ix)	D	1
(x)	A	1
(xi)	D	1
(xii)	B	1
(xiii)	D	1
(xiv)	B	1
(xv)	B	1


Question 2	1 Mark for each correct answer	[10 Marks]
a)	Storyboard	1
b)	Utility	1
c)	Freezes	1
d)	Watermark	1
e)	Sorting	1
f)	New	1
g)	Network	1
h)	Eyestrain	1
i)	Decision	1
j)	Field	1

Question 3	1 Mark for each correct answer	[10 Marks]
b)	True	1
c)	False	1
d)	False	1
e)	False	1
f)	True	1
g)	True	1
h)	False	1
i)	False	1
j)	True	1
k)	False	1

Question 4		1 Mark for each correct answer	[10 Marks]
a)	(ii)	5	1
	(iii)	2	1
	(iv)	7	1
	(v)	4	1
	(vi)	1	1
b)	(i)	LAN	1
	(ii)	URL	1
	(iii)	Themes	1
	(iv)	Input Device	1
	(v)	WAN	1

Question 5			[5 Marks]
a)		Any two from: <ul style="list-style-type: none"> • Move/Click the mouse • Press any key on the keyboard to wake it up. • Touch the screen <p style="text-align: right;">[Acceptable answer]</p>	1+1
b)	(i)	Spreadsheet	1
	(ii)	Word processing	1
	(ii)	Search Engine	1

Section B

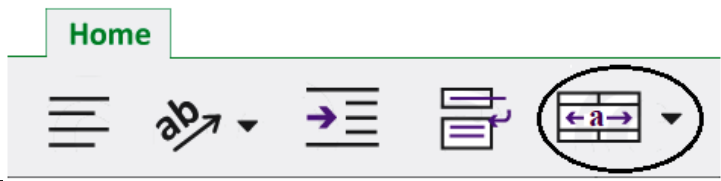
Question 6			[12 Marks]
a)	(i)	Accept Windows or Windows 10 or Window 10 Pro	1
	(ii)	Accept 3.40 or 3.40 GHz or [3.40 *5 because it is an i5]	1
	(iii)	2 Marks for any two from <ul style="list-style-type: none"> • Provides user interface • Helps in Memory Management • Processor Management • Manages Storage Media and Files • Allows a user to communicate with the computer • Handles errors • Monitors system performance • Manages installation and deinstallation of applications • Maintain Security <p style="text-align: right;">[Accept any other correct answer]</p>	1 + 1
b)	(i)	1 Mark for correct answer 	1
	(ii)	1 Mark for each correct word Copy [1 Mark] and Paste [1 Mark] 1 mark for only one correct word	1 + 1

	(iii)	2 Marks for any correct advantage <ul style="list-style-type: none"> The same standard document can be used with different data sources Any change to the main document is replicated to other document Easy to make a change to the main document and for that change to happen in every other document e.g. change the date Once the merge has been set up, several documents can be produced very quickly Much easier to proof read just one letter than several Letters can be personalized where data such as names can be used <p style="text-align: right;">[Accept any other correct answer]</p>	2
	(iv)	1 Mark for each correct answer <ul style="list-style-type: none"> 1 C 2 D 3 B 	1 1 1

Question 7			[5 Marks]										
a)		Thought bubble or thinking bubble	1										
b)		2 Marks for correct sequence or 1 Mark for 1 correct answer and No mark for other answers <table border="1" style="display: inline-table; margin-right: 20px;"> <thead> <tr><th>Steps</th></tr> </thead> <tbody> <tr><td>Draw the panels</td></tr> <tr><td>Add in the speech and lettering</td></tr> <tr><td>Write your ideas for your comic</td></tr> <tr><td>Use basic shapes to draw</td></tr> </tbody> </table> <table border="1" style="display: inline-table;"> <thead> <tr><th>Correct Order</th></tr> </thead> <tbody> <tr><td>2</td></tr> <tr><td>4</td></tr> <tr><td>1</td></tr> <tr><td>3</td></tr> </tbody> </table>	Steps	Draw the panels	Add in the speech and lettering	Write your ideas for your comic	Use basic shapes to draw	Correct Order	2	4	1	3	2
Steps													
Draw the panels													
Add in the speech and lettering													
Write your ideas for your comic													
Use basic shapes to draw													
Correct Order													
2													
4													
1													
3													
c)		1 Mark for each correct point <ul style="list-style-type: none"> 1. Animation 2. Transition 	1 1										

Question 8			[9 Marks]
a)		1 Mark for each correct answer <ul style="list-style-type: none"> Maintain a good sitting posture Use ergonomic chairs/chairs with proper back support Take regular breaks Use of foot rests <p style="text-align: right;">[Accept any other correct answer]</p>	2
b)		1 mark for each danger <ul style="list-style-type: none"> virus hacking spam phishing 	2
c)	(i)	1 Mark for any valid answer <ul style="list-style-type: none"> A private network Accessible by the call centre staff only 	1

	(ii)	1 Mark for any correct answer <ul style="list-style-type: none"> • Sharing of documents among staff • Internal communication like chatting and videoconferencing • Sending emails • Viewing websites <p style="text-align: right;">[accept any relevant example]</p>	1
	(iii)	router	1
d)		1 Mark for any correct answer Italic /body	1 1

Question 9			[8 Marks]
a)	(i)	One mark for encircling the correct tool 	1
	(ii)	One mark for any correct answer <ul style="list-style-type: none"> • C7 • C8 	1
	(iii)	Two marks for correct formula. One mark for any incorrect part such as wrong cell address, wrong operator or not using equal to sign. = B4 / C4 Accept = 48 / 4.0	2
	(iv)	2 marks proper formula = IF (D4>=12, "YES", "NO") 1 for identifying D4>= and 1 for writing "YES", "NO"	2
	(v)	Two marks for giving the correct answer =COUNTIF (E4:E9, "YES") OR = COUNTIF (D4:D9, ">=12") 1 for identifying COUNTIF (E4:E9, "YES") and 1 for COUNTIF (D4:D9, ">=12")	2

Question 10			[5 Marks]
a)		1 mark for correct number of records <ul style="list-style-type: none"> • 5 	1
b)	(i)	1 mark for field "ClassID"	1
	(ii)	It is the only field where there are no duplicate values <p style="text-align: right;">[accept any valid answer]</p>	1
c)		1 Mark for correct order 1 mark for correct value <ul style="list-style-type: none"> • Paul Smith • Diana Abur 	1+1

Question 11 **[11 Marks]**

a)

1 mark for each correct input and output
 1 mark for proper conversion of temp
 1 mark for correct use of counter
 1 mark for proper decision
 1 mark for correct symbols used
 1 mark for correct data flow

Max 5

```

    graph TD
      Start([Start]) --> Count[Count = 1]
      Count --> Input[/Input Temperature/]
      Input --> Process[C = (Temperature - 32) X 0.56]
      Process --> Display[/Display Celsius/]
      Display --> Increase[Increase Count by 1]
      Increase --> Decision{Count > 5?}
      Decision -- Yes --> End([End])
      Decision -- No --> Input
    
```

b)

One mark for each correct output

INPUT		OUTPUT
x	y	A
2	3	2
4	-4	-2
-5	6	-5

1
1
1

c)

One mark for each correct output

Name = 'Simon'
 Age = '19'
 print ('Name' , 'Age')

or

print ('Simon','19')

Accept also "Simon" and "19"

Proper use of variables

1 + 1 + 1