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Cambridge International AS & A Level

Cambridge Assessment International Education
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CANDIDATE NAME

CENTRE NUMBER | | | | | |

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4053683181

INFORMATION TECHNOLOGY **9626/12**

Paper 1 Theory **February/March 2019**

1 hour 45 minutes

Candidates answer on the Question Paper.

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

Write your centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

Calculators must not be used on this paper.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

Any businesses described in this paper are entirely fictitious.

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1 Tick the **four** statements, referring to different types of application software, which are true.

	✓
You can use word processing software to create tables of data	
You can only use database software to create reports	
Spreadsheet software can be used to produce charts	
You must always use web authoring software when creating web pages	
Financial modelling can involve the use of spreadsheet software	
Video editing software cannot be used to edit a music soundtrack	
Word processing software can include multimedia features	
You can only create data forms using database software	
Photo editing software is only used to edit photos	
A management information system (MIS) is a form of database management system	

[4]

2 Tick the **four** most accurate statements, referring to the digital divide.

	✓
The digital divide can exist between the educated and uneducated	
The digital divide can exist between those living in rural areas and those living in urban areas	
The digital divide does not exist between people from different economic classes	
Everyone these days owns a smartphone so the divide is closing rapidly	
Minority groups have no difficulty performing transactions on smartphones thereby reducing the divide	
Disabilities of potential internet users constitute another type of digital divide	
Some less developed countries have limited access to digital services	
Most tribal communities have universal mobile phone coverage in their community	
The digital divide only refers to those who can and cannot access the internet	
The price of connection to the internet tends not to vary between countries	

[4]

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3 A student is researching the topic of her new assignment. She has been provided with a series of hard copy magazine articles. She has been told by her tutor that these are probably more reliable than searching the World Wide Web for information.

Compare and contrast the use of these two types of data sources for her research.

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4 There are many types of systems software including interpreters and device drivers.

(a) In order for a computer to output to a printer it uses a printer driver. This is just one of many device drivers a computer uses.

Explain the purpose of device drivers.

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(b) Describe the function of an interpreter.

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5 A teacher has reminded her students to proof read their assignments before they hand them in.

Define the term 'proof reading'.

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6 Many mobile phone companies, in the past, persuaded customers to move from 3G to 4G.

Compare and contrast 3G and 4G technologies.

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7 Mumbai Stores is a company which has a chain of shops. The company stores the customers' reference number, and the value of the goods they have purchased, in a transaction file. Any payments the customers have made on their account at the end of the month are also stored in the same file.

Parts of the Transaction file and Master file are shown.

The Goods_bought field contains only the value of goods bought using the account's credit facilities.

The Master file shows the customers reference number, the money they owe from the previous month (Old_balance) and the money they now owe (New_balance).

The New_balance has to be calculated by using the Old_balance, Goods_bought and any Payment made. All these values are in rupees.

Transaction file

Customer_ref_no	Goods_bought	Payment
943201	5500	4000
256431	3800	3800
319852	9200	10000
433303	3200	5200
590871	4300	6800
612759	3700	3700
650897	2300	2300
698915	4000	6600
751654	4400	4400
804782	5200	8200

Master file

Customer_ref_no	Old_balance	New_balance
256431	0	
319852	10000	
433303	5000	
590871	4500	
599812	0	
612759	0	
650897	0	
678945	6800	
698915	2600	
712356	5100	
751654	0	
804782	4200	
943201	0	
963584	2400	

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(a) Describe the processes that must happen to the Transaction file before the Master file can be updated.

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(b) Using this data, explain how the Master file is updated using the Transaction file shown. You may assume that the only transaction being carried out is the calculation of the New_balance.

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(c) Each customer has a credit limit of 20000₹. Customers must make a payment of at least 2000₹ each month.

Using examples from the Transaction file, explain why it would be appropriate to use a range check on one field and a limit check on another field.

Please note, the Customer_ref_no is stored as text.

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8 Rishu has been asked by the directors of the company she works for to set up a fully functioning video-conferencing room. It will be used by several workers at the same time to communicate with the directors who will be in a different building.

Describe, including a use of each item, the hardware she will need to purchase.

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9 Describe the differences between health issues and safety (apart from e-safety) issues experienced by employees in an IT-based work environment.

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10 Jasvir owns a gardening equipment hire shop. She has developed a simple database system which contains information about the equipment. Each record contains the following data: Equipment_name, Manufacturer, Equipment_code (a six character code), Hire_price, Number_of_days_hired, Date_hired, Customer_number and Loyalty_customer (Y/N).

Design an appropriate online data entry form for **one** item of equipment, clearly indicating the amount of space required for each field. Use the computer screen shown below for your design. Where appropriate allow the user to enter data by clicking the mouse rather than entering text.

[8]

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11 Juanita is the company secretary of a small business in the USA. She has created a spreadsheet to calculate the payroll.
The spreadsheet is shown below.

	A	B	C	D	E	F	G	H	I	J	K	L
1							Roles					
2							L	F	OS	M	D	
3							Labourer	Fitter	Office secretary	Manager	Director	
4							$15	$25	$22	$40	$80	Hourly rate
5		Job codes	Job title	Hours worked	Weekly pay							
6												
7	John Vercoe	L	Labourer	40	$600							
8	Lauren Hall	OS	Office secretary	38	$836							
9	Chloe Rhodes	F	Fitter	39	$975							
10	Owen Williams	OS	Office secretary	42	$924							
11	Lotte Charles	L	Labourer	35	$525							
12	Jeannie Burke	OS	Office secretary	38	$836							
13	Jimmy Lee	F	Fitter	40	$1,000							
14	Dawid Jones	F	Fitter	32	$800							
15	Li Sun Wu	M	Manager	45	$1,800							
16	Charlotte Watson	D	Director	50	$4,000							
17	Joe Norfolk	M	Manager	41	$1,640							
18	Joanne Floyd	F	Fitter	38	$950							
19	Anthony Campbell	F	Fitter	40	$1,000							
20	Linda Stuart	L	Labourer	38	$570							
21	Kate Smith	L	Labourer	37	$555							
22	Sam Smith	OS	Office secretary	40	$880							
23	Duncan Rydell	L	Labourer	36	$540							
24	Tony Thomson	L	Labourer	37	$555							
25	Dougie Ryder	OS	Office secretary	41	$902							
26												

(a) She has created a named range **Roles**

Describe how she created this named range.

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(b) She entered a formula in E7 using the named range and the information in column B to calculate the weekly pay for John Vercoe.

Write down the formula she used. This formula should be easy to replicate.

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You can use the space below for any working you need.

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12 A recent development in backing storage of laptop computers has been the increased use of solid state drives (SSDs). However hard disk drives (HDDs) are still used in many laptops.

Evaluate the use of SSDs and HDDs for storing data in laptop computers.

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13 Encryption can be used to protect data on a hard disk and in emails.

Evaluate the need for this encryption.

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