

Cambridge Assessment International Education

Cambridge International Advanced Subsidiary and Advanced Level

CANDIDATE NAME					
CENTRE NUMBER			CANDIDATE NUMBER		

0769054241

INFORMATION TECHNOLOGY

9626/32

Paper 3 Advanced 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 the 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.

1 Errors in JavaScript code can cause the code to fail to execute when run by a web browser. The code shown is intended to display a table on a web page when run in a web browser. The line numbers are shown only for your convenience when referencing the code in your answers.

```
1
  <html>
2 <body>
3 <script language="JavaScript">
4 tableout = "<table border='1' width='300' cellspacing='0'
  cellpadding='3'>"
5 for (b = 1; b \le 10; b++) {
6 tableout = tableout + "":
7
  for (g = 1; g \le 10; g++) {
8 tableout = tableout + "" + b * g + "";
9 }
10 tableout = tableout + "";
11 }
12 tableout = tableout + "";
13 document.write (tableout);
14 </script>
15 </body>
16 </html>
```

(a) The code does not run as intended in web browsers because there is an error in the code.

Describe how the error in the code prevents the web browser from running as intended.

 	 	 	[2]

(b)	Errors can be 'trapped' in order that the performance of the web browser is not affected.
	Explain how you can use error handling techniques to trap errors in JavaScript code.
	15

(a)	Describe the characteristics of online tutorials.
	[2]
(b)	Two types of online tutorial are 'recorded' and 'interactive'. 'Recorded' tutorials do not require user input, but 'interactive' tutorials do.
	Describe the differences between these two types of online tutorial.
	[4]

etworks.	usc or	quantum	cryptography	WIIEII	transmitting	Comidential	uala	ovei	public

Layers can be used when editing digital images.
(a) Describe what is meant by a 'layer' in computer graphics.
[1
(b) Describe how layers could be used to enhance a digital image.
[4

(c)	Discuss the magazines.	impact	on s	society	of t	he	use	of	image	editing	on	photo	graphs	in	fashion
															[8]

3D	printing is used in medicine.
(a)	Describe two benefits of being able to produce artificial blood vessels by 3D printing.
	[2]
(b)	Describe how 3D printing could be used, apart from producing drugs at home, to improve the effectiveness of the manufacture of prescription drugs.
	[4]

(c)	Describe the drawbacks of using 3D printing at home to produce prescription drugs.								
	[4]								

A company sells glass for installation into rectangular windows. The company cannot make glass for windows with dimensions smaller than width 12 cm and height 8 cm. The price of a window is calculated by working out the area of the window and multiplying it by the cost per square centimetre (cm²), which is 20₹.

	Area of window = a × b
	Price = area × cost per cm ²
b	

A spreadsheet with formulas has been created to carry out these calculations.

	Α	В	С	D	
1					These cells will be validated
2	Input a	14 -	cm		using a range check
3	Input b	9-	cm		
4					
5					
6	Area is:	126	cm ²		
7	Cost per cm ² is:	20	rupees		
8	Price is:	2520	rupees		
9					
10					

A test plan must be created to fully test the spreadsheet before the company use it.

Use this table to design a suitable test plan for this spreadsheet.

Evaluate ways of combatting spyware.
[8]

The owners of a bank are replacing its current system by transferring all accounts and processes to a new computer system. They have to be sure that the new system will carry out all the functions

of the old system.	
It is essential that there is no interruption in the services provided by the bank's to its staff and customers.	s computer system
Choose the most appropriate method of implementation and explain how the rimplemented.	new system will be
	[8]

9 The manager of a small shop is creating a new relational database that will store details of the goods sold by the shop. It will also store details of the suppliers of these goods. The manager collects the details that are shown on the labels attached to the goods. He gathers the details of the suppliers from a notebook that he keeps. Five examples of labels are shown:

Item	Beans
Quantity in pkt	100 g tin
Price	\$2
Sell by date	N/A
Cost per 1000 g	\$20

Item	Flour
Quantity/pkt	2 kg sack
Price	\$3
Sell by date	Dec 2019

Item	Sugar
Quantity in pkt	2 kg bag
Price	\$3
Sell by date	March 2020

Item	Soya
Amount in pkt	1000 g bag
Price	\$5.46
Cost per 1000 g	\$5.46
Sell by date	20 Nov 2019

Item	Rice
Quantity/pkt	5 ½kg sack
Price	440 cents
Sell by date	07 June 2029

The shop can obtain all of its goods from any of these four suppliers:

Shop Suppliers Inc	Sugar Suppliers plc	General Shop	Cash & Carry Goods
	Bury St Edmunds	Wholesalers	
PO Box 2300		2500 Newmarket Rd	65a Board View
	Suffolk	Cambridge	
Pennsylvania Av	IP66 7ES	CB6 5PE	Milford Haven
Washington DC			Dyfed
		United Kingdom	
20500			UK
			SA85 2NX

pplier details.			

10	An international organisation provides communication services over the internet. It enables customers to communicate messages confidentially between their offices in different countries.
	It uses message, circuit and packet switching technologies for the communications.
	Describe the differences between these three technologies as used in communicating these messages.
	[8]

11	A company has developed a new product. Its market research department has decided to use chat rooms to gather information from potential customers about the product.
	Explain why they would use a chat room rather than other social networking methods to gather the customer information.
	ra)

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