Cambridge International AS & A Level

Cambridge International Examinations
Cambridge International Advanced Subsidiary and Advanced Level

CANDIDATE NAME	

CENTRE NUMBER						CANDIDATE NUMBER					

INFORMATION TECHNOLOGY **9626/33**

Paper 3 Advanced Theory **May/June 2017**

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.

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.

This document consists of **14** printed pages and **2** blank pages.

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CAMBRIDGE International Examinations

1 A bank has strategies in place to safeguard its information technology (IT) services. You have been asked to check and update the strategies that are designed to try and prevent IT disasters from happening, the strategy for disaster recovery management and the strict password policy.

(a) Describe how you would use risk analysis to check the strategy for disaster recovery management.

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(b) The bank's strict password policy has rejected these two passwords:

abc
1234AAA

Explain why they have been rejected.

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(c) Explain the precautions that you would take to try and prevent a disaster happening to the data used by the IT services.

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2 Project management software is used to create an overview of the tasks or activities required in a project.

One type is desktop-based project management software.

Describe other types of project management software.

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3 Frank is a web designer who writes his own code and uses JavaScript on his webpages. He wants to print his name on every page. He creates two versions of the code to run his JavaScript on the webpage. These versions are represented here:

Version 1:

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<script language="JavaScript">
document.write ("<p>My name is <b>Frank </b> </p>");
</script>
```

Version 2:

```
<script language="JavaScript" src="FranksJavaScriptcode.js">
</script>
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where the instructions for writing Frank's name are in the file called "FranksJavaScriptcode.js"

Explain why Frank prefers to use Version 2 of the code.

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4 A wide area network uses a number of different protocols.

(a) Describe each of the following wide area network (WAN) protocols.

(i) HDLC:

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(ii) Frame relay:

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(b) An updated version of a free operating system has to be downloaded quickly. The operating system is contained in a very large file. There is a choice of using 'BitTorrent' or file transfer protocol (FTP) for the download.

Explain, with reasons, which method of download would be preferable.

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(c) Describe how a network router provides connectivity between a home network and the internet.

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5 Discuss the benefits and drawbacks to small businesses of storing their data in the 'cloud'.

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6 A new operating system for tablet computers has been developed and is now ready for testing to begin.

Analyse the difference between white box testing and black box testing.

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7 Evaluate the use of 3D printing for manufacturing goods.

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8 You have been asked to use data mining to analyse economic trends for a business.

Describe the tasks involved in data mining that you would have to carry out to produce an overview of an economic trend.

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9 Dylan works for a graphics design company producing images in GIF, JPEG and PNG file formats. He has been asked to produce some high-quality still images for use in advertising on the World Wide Web. He has to choose one of the file formats to store the images.

Choose the most appropriate file format by comparing the features of the three different formats.

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10 A large, profitable manufacturing company wishes to replace its current computer system with a new one. The company employs a large workforce in many different departments. The time to be taken for the implementation is not important but the new system must work as efficiently as possible.

The company has chosen the most appropriate method of implementation to suit its circumstances.

Identify the chosen method and explain, with reasons, why the company has chosen this compared to other methods.

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11 A large company employs a small team of workers to design a new, complex product. They all work on the same site and need to discuss possible designs and costings and to exchange documentation on a weekly basis. Network connections are intermittent.

The company could use video-conferencing or face-to-face meetings for the workers' discussions.

Identify, giving reasons, the more appropriate method.

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