

**B O A R D O F S T U D I E S**  
NEW SOUTH WALES

**2006**

**HIGHER SCHOOL CERTIFICATE  
EXAMINATION**

# Information Technology

## General Instructions

- Reading time – 5 minutes
- Working time – 2 hours
- Write using black or blue pen
- Board-approved calculators may be used
- Write your Centre Number and Student Number at the top of pages 9, 17 and 21

**Total marks – 80**

**Section I** Pages 2–7

**15 marks**

- Attempt Questions 1–15
- Allow about 15 minutes for this section

**Section II** Pages 9–21

**35 marks**

- Attempt Questions 16–19
- Allow about 45 minutes for this section

**Section III** Page 23–26

**30 marks**

- Attempt TWO questions from Questions 20–22
- Allow about 1 hour for this section

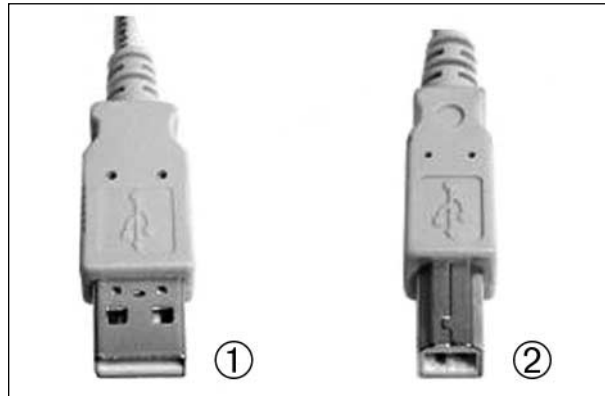








- 10 Which of the following statements correctly describes connectors ① and ② and the type of cable used?



- (A) ① is an *A connector*, ② is a *B connector*, and the cable is *Cat5E*.  
(B) ① is an *A connector*, ② is a *B connector*, and the cable is *USB*.  
(C) ① is a *B connector*, ② is an *A connector*, and the cable is *Cat5E*.  
(D) ① is a *B connector*, ② is an *A connector*, and the cable is *USB*.
- 11 Part-time pay claims for Saturday 26/8/2006 were rejected with the message '26/8/05 WAS A FRIDAY - WEEKEND PENALTY RATES DO NOT APPLY'. All other pay claims were accepted.

What is the most likely cause of this error?

- (A) There was a hardware failure.  
(B) The CPU speed was wrong.  
(C) There was a power failure in the server room.  
(D) An incorrect backup tape was used to restore data after a disk failure.
- 12 Which method of storage is used in the device shown?



- (A) USB  
(B) Optical  
(C) Magnetic  
(D) Non-volatile











**Question 17** (10 marks)

The following tables are part of a library database.

<b>Book Table</b>				
<b>Book_No</b>	<b>Book_Title</b>	<b>Author</b>	<b>Publisher</b>	<b>ISBN</b>
001.567/9	Information Technology	Koreneff & Sims-McLean	Pascal Press	1741251176
303.483	Information Technology	Hartles & Kelly	Heinemann	1740811119
001.3123/3	Webster's Computer Dictionary	Pfaffenberger	Wiley	076452478X
001.3124/7	Dictionary of Computing	Collin	Bloomsbury	0747566224
343.123	I.T. Curriculum Framework	OBOS	Board of Studies	1740994116

<b>Borrower Table</b>					
<b>Borrower_ID</b>	<b>Title</b>	<b>F_Name</b>	<b>L_Name</b>	<b>Address</b>	<b>Phone_No</b>
1011	Ms	Kim	Pine	17 York St Sydney 2000	92123451
1012	Mr	Ti	Huon	19 Clarence St Sydney 2000	92343467
1013	Mrs	Frieda	Pharos	25 Miller St Nth Sydney 2060	92562134
1014	Miss	Angela	Webster	333 Bourke St Darlinghurst 2010	92897129
1015	Mr	Lech	Gowitzter	256 George St Sydney 2000	92787896
1016	Ms	Jane	Wayne	186 Phillip St Sydney 2000	92698508
1017	Mr	Heath	Wayne	186 Phillip St Sydney 2000	92698508

<b>Loan Table</b>			
<b>Book_No</b>	<b>Borrower_ID</b>	<b>Date_Due</b>	<b>Loan_ID</b>
343.123	1012	28/9/06	100056
001.3123/3	1015	30/9/06	100057
001.567/9	1011	26/9/06	100058
303.483	1014	25/9/06	100059

**Question 17 continues on page 13**























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In your answers you will be assessed on how well you:

- demonstrate relevant knowledge and understanding
  - communicate ideas and information, using precise industry terminology and appropriate workplace examples
  - organise information in a well-reasoned and cohesive response
  - solve proposed issues or problems
- 

**Question 21** (15 marks)

UniPrint Pty Ltd prepares course manuals for university students using desktop publishing software. UniPrint has a very high demand at the beginning of each semester in March and July. In July 2006 the high-speed WorkHorse9 printer failed repeatedly and students did not get their manuals on time. The manager at UniPrint has asked for help from the technician at WorkHorse to make sure this does not happen again.

Using the information provided, write a report to the manager at UniPrint Pty Ltd which analyses the reasons for the problems with their printer and which proposes short-term and long-term solutions to these problems under the operating conditions at UniPrint Pty Ltd.

The manufacturer's recommended maintenance schedule is given below.

<b>Recommended maintenance schedule for WorkHorse9</b>			
Allow 3 working days for delivery of parts			
	<i>Frequency</i>	<i>Indicators</i>	<i>Action required</i>
1	Every 150 000 pages	The message 'REPLACE FUSER UNIT' appears in the instruction panel.	REPLACE FUSER UNIT: <ul style="list-style-type: none"><li>• Remove old fuser unit</li><li>• Clean fuser unit area with cleaning material (supplied)</li><li>• Insert new fuser unit</li></ul>
2	Every 300 000 pages	The message 'REPLACE PAPER FEED UNIT' appears in the instruction panel.	REPLACE FUSER UNIT: (see above) REPLACE PAPER FEED UNIT: <ul style="list-style-type: none"><li>• Remove old paper rollers</li><li>• Clean roller area with cleaning material (supplied)</li><li>• Attach new paper rollers</li></ul>
3	Every 2 000 000 pages	The message 'FULL SERVICE REQUIRED' appears in the instruction panel.	Ring 1 200 300 to arrange an appointment with one of our service engineers

**Question 21 continues on page 25**

Question 21 (continued)

The WorkHorse9 is a very expensive, high capacity printer which is networked and connected to the internet. The printer automatically sends an email to the manufacturer's helpdesk to make a record of routine maintenance procedures carried out by UniPrint. Additional maintenance information is also entered manually in this log.

SELECTED ENTRIES FROM WORKHORSE9 MAINTENANCE LOG FOR UNIPRINT MACHINE NO.1				
<i>Date</i>	<i>Call ID</i>	<i>Number of pages</i>	<i>From</i>	<i>Details</i>
9/7/05	155	615 121	Workhorse Technician	Service call: Installed new paper feed kit and fuser unit, cleaned
15/7/05	165	760 010	Umar UniPrint	Phone call: Copies marked, streaky Service call: Fuser unit replaced and cleaned
30/7/05	173	900 030	Printer	Paper feed unit replaced. Fuser unit replaced
4/10/05	183	1 065 050	Printer	Fuser unit replaced
6/3/06	190	1 215 000	Printer	Fuser unit replaced
7/3/06	193	1 227 000	Catrina UniPrint	Phone call: printer won't print
8/3/06	193	1 227 000	Workhorse Technician	Service call: Installed paper feed kit, installed new fuser unit. Cleaned
15/3/06	210	1 370 010	Printer	Fuser unit replaced
28/3/06	221	1 550 980	Lisa UniPrint	URGENT Phone call: printer keeps clogging. Service call: Paper feed kit and fuser replaced, cleaned and adjusted
5/6/06	240	1 658 027	Uho UniPrint	Phone call: copies filthy Service call: Replaced fuser unit
2/7/06	252	1 800 235	Printer	Fuser unit replaced
2/7/06	253	1 802 305	Mary UniPrint	Phone call: Paper jamming and creasing
3/7/06	253	1 802 305	Workhorse Technician	Service call: Paper feed kit installed, fuser unit installed and machine cleaned
8/7/06	268	2 110 065	Greg UniPrint	Phone call: creased copies, keeps jamming, noisy operation

**End of Question 21**

**Please turn over**

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In your answers you will be assessed on how well you:

- demonstrate relevant knowledge and understanding
  - communicate ideas and information, using precise industry terminology and appropriate workplace examples
  - organise information in a well-reasoned and cohesive response
  - solve proposed issues or problems
- 

**Question 22** (15 marks)

E-Travel Pty Ltd is a small company which publishes an online magazine about holiday travel. It employs professional journalists to write feature articles and accepts contributions from readers about their holiday experiences.

Each issue of the online magazine features one destination and has the following sections:

- ① Editorial
- ② Featured destination
  - History
  - How to get there
  - Things to do
  - Special deals
- ③ Readers' experiences at the featured destination

After a few issues it was found that a lot of time was spent converting file formats and formatting the readers' contributions, including text, graphics, sound and video. It was difficult to find files submitted about the featured destination and to track the status of articles prior to publication.

Write a report to analyse the software requirements and file handling procedures needed to produce the online magazine. Your report should address:

- software applications;
- strategies to simplify converting and formatting readers' files, and;
- strategies to locate and track the status of files.

**End of paper**