



St Hilda's  
ANGLICAN SCHOOL FOR GIRLS

**SEMESTER ONE EXAMINATION, 2007**

**QUESTION / ANSWER PAPER**

**APPLIED INFORMATION  
TECHNOLOGY 2A**

Write your name and exam number in this box

***Time allowed for this paper***

Reading time before commencing work: Ten minutes  
Working time for paper: Two hours.

***Material required/recommended for this paper***

**To be provided by the supervisor**

This Question/Answer Booklet

**To be provided by the candidate**

Standard Items: Pens, pencils, eraser or correction fluid, ruler.

**Important note to candidates**

No other items may be taken into the examination room.

It is your responsibility to ensure that you do not have any unauthorised notes or other items of a non-personal nature in the examination room. If you have any unauthorised material with you, hand it to the supervisor **before** reading any further.

### ***Structure of this paper***

Section	No. of questions to be answered	Suggested working time	Marks available
1 ALL OUTCOMES: MULTIPLE CHOICE	ALL	10 mins	10
2: OUTCOME 2 (COMPUTERS)	ALL	30 mins	30
3: OUTCOME 1 (TECHNOLOGY PROCESS)	ALL	40 mins	30
4: OUTCOME 4 (SOCIAL AND LEGAL)	ALL	40 mins	30
Total Marks			100

### ***Instructions to candidates***

1. The rules for the conduct of this examination are specified in the Student Information Handbook. Sitting this examination implies that you agree to abide by these rules.
3. Write your answers in the spaces provided in this Question/Answer Paper. You may ask for extra blank paper if it is required. If you do use this indicate in the original answer space where the answer is continued. Scrap paper is also available for making notes.
4. Marks available for each question are given either at the end of the question or in the rubric of each part.
5. It is strongly recommended that you **do not use pencil**, except in diagrams.
6. You should note that the space made available for an answer ***does not necessarily*** give any indication of the length of an appropriate answer.
7. At the end of the examination, check that your name has been written in the box provided on the front cover of this Question/Answer paper and ***any extra paper you used***.

**SEE NEXT PAGE**

### **SECTION 1: Multiple Choice Items (10 Marks)**

Attempt all questions in this part. Each question is worth 1 mark. Each question has only one correct response. For each question select the single response that is correct. Signify your answer by circling the label (**a**, **b**, **c** or **d**) of the correct response.

1. Which of these formats would be best for publishing a photo on the web?
  - a) Tiff
  - b) bmp
  - c) jpeg
  - d) PDF
  
2. A vector image is made up of:
  - a) Dots
  - b) Lines defined by a start and end point
  - c) A large number of pixels
  - d) a pixel array
  
3. Observing the principles of good design, what is the maximum number of fonts in an information product?
  - a) 1
  - b) 2
  - c) 3
  - d) as many as you like
  
4. If you were evaluating a product, which techniques would you use?
  - a) survey
  - b) test on audience
  - c) ask client
  - d) all of the above.
  
5. How many colours can a GIF file represent?
  - a) 256
  - b) 21
  - c) 1024
  - d) 10,000

6. What criteria would you use when evaluating an internet information source?

- a) Language of site
- b) Identifiable author
- c) Date of update
- d) All of the above

7. What is resolution?

- a) Making the pixels smaller
- b) Increasing the number of pixels
- c) Number of pixels in image
- d) File size of image

8. Which of the following is true of lossy compression?

- a) Data are lost
- b) No data are lost
- c) It is a feature of compression of GIF images
- d) It is a type of compression found exclusively in web images

9. Web authoring software is concerned with:

- a) Programming web pages using HTML
- b) Designing web pages using HTML
- c) Designing web pages using HTML and JavaScript
- d) Designing web pages using GUIs which create HTML code

10. GHz is a measure of a computer's:

- a) Storage capacity
- b) Speed of processing
- c) Front end bus speed
- d) Operating system









**SECTION 3: (Outcome 1: Technology Process)**  
**QUESTION 12**

**Read the following passage carefully:**

Some of the ways that the Water Board wishes to encourage the public to save water in the home are:

1. Never put water down the drain when there may be another use for it such as watering a plant or garden, or cleaning.
2. Verify that your home is leak-free, because many homes have hidden water leaks. Read your water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, there is a leak.
3. Repair dripping taps by replacing washers. If your tap is dripping at the rate of one drop per second, you can expect to waste 2,700 gallons per year which will add to the cost of water and sewer utilities, or strain your septic system.
4. Check for toilet tank leaks by adding food colouring to the tank. If the toilet is leaking, colour will appear within 30 minutes. Check the toilet for worn out, corroded or bent parts. Most replacement parts are inexpensive, readily available and easily installed. (Flush as soon as test is done, since food colouring may stain tank.)
5. Avoid flushing the toilet unnecessarily. Dispose of tissues, insects and other such waste in the rubbish bin rather than the toilet.
6. Take shorter showers. Replace you showerhead with an ultra-low-flow version. Some units are available that allow you to cut off the flow without adjusting the water temperature knobs.
7. Use the minimum amount of water needed for a bath by closing the drain first and filling the bath only 1/3 full. Stopper bath before turning water. The initial burst of cold water can be warmed by adding hot water later.
8. Don't let water run while shaving or washing your face. Brush your teeth first while waiting for water to get hot, then wash or shave after filling the basin.
9. Retrofit all wasteful household taps by installing aerators with flow restrictors.
10. Operate automatic dishwashers and clothes washers only when they are fully loaded or properly set the water level for the size of load you are using.

(SOURCE: <http://www.gdrc.org/uem/water/49-ways.html>)





(d) Draw a structure diagram for your proposed solution: **(2 marks)**

(e) List the main design principles in your solution **(4 marks)**

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e) List the software you will require to achieve your aims. Remember that your web site may require sound and movies as well as graphics. Justify and explain your choice of software. Marks for this question are determined by the amount of **relevant detail** that you include in your answer. **(4 marks)**

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**SECTION 4: (Outcome 4: Social, legal, environmental issues)**

**QUESTION 13**

**Our web site for the Arts Festival contains both movies of student performances and art work, as well as work created by students. It is on the school Intranet and is not available to general members of the public.**

**Some parents have contacted the school and requested that the Arts Festival web pages be placed on the school web site. They also think that it would be good practice for the girls to create the web site entirely themselves without any staff supervision.**

**PLEASE NOTE THIS A FICTITIOUS REQUEST!**

(a) **(8 marks):** Give an example of EACH of the following issues in relation to publishing Arts Festival events on a school web site:

A social issue:

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A legal issue:

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An ethical issue:

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An environmental issue:

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(b) **(2 marks)**: What is the difference between an ethical and a legal issue?

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(c) **(2 marks)**: List 1 legal problem which may arise from publishing Arts Festival events on a school intranet (different from the legal issue you may have mentioned in (a) )

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(d) **(6 marks)**: Describe 3 health problems which may be caused by people working for a long time at a computer eg creating a web site?

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(e) **(3 marks)**: List 3 practical steps which may be taken to help with these health problems:

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(g) **(2 marks)**: Problems may occur if school students are permitted to set up web sites without responsible supervision. Give 2 examples of these problems.

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(g) **(1 mark)**: What would be 1 advantage for students of permitting them to set up school web pages such as the Arts Festival site?

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(h) **(2 marks)**: Describe 1 positive and 1 negative environmental consequence of publishing the Arts events on a web site instead of in print form

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(i) **(4 marks)** List 4 careers or jobs for which students would gain valuable experience by setting up a web site:

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**END OF EXAM PAPER**