T A S M A N I A N

S E C O N D A R Y

A S S E S S M E N T

B O A R D

MD876

Computer Graphics & Design

2000 External Examination Report

Statistical Summary

Award Summary

Outstanding Achievement (OA)	20
High Achievement (HA)	90
Satisfactory Achievement (SA)	116
Reassessed into neighbour	29
Total candidates	255

Gender Breakdown

Males	227
Females	28

Ratings awarded (internally and externally)

Criterion	A			B			C			D	
	int	ext		int	ext		int	ext		int	ext
Criterion 1	78			92			73			7	
Criterion 2	70	21		99	96		76	115		8	7
Criterion 3	57	41		106	57		86	85		4	50
Criterion 4	62	35		114	77		68	87		7	34
Criterion 5	59	16		101	96		85	117		7	10
Criterion 6	67			105			68			11	
Criterion 7	81			92			67			12	
Criterion 8	78			96			74			2	
Criterion 9	35	33		98	102		105	75		14	28
Criterion 10	93			96			63			1	

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Practical Examination Report

The Practical Examiners were pleased with the overall ratings awarded for the 50 hour Computer Graphics and Design major projects for 2000 with the vast majority of students presenting their work in a digital format. Many students missed out on higher ratings particularly in criterion number three due to lack of evidence of the design process.

2000 was the first year that a Project Proforma was introduced and it allowed all students to let the examiners know very clearly if they had produced evidence of design sketching, story boards or other research for the practical markers. A small number of students ticked all aspects of their work as being present when indeed it was nowhere to be found by the examiners. Students not presenting all of the above aspects of their major project as clearly outlined in the proforma had considerably lower ratings awarded.

Written Examination Report

Section A

Students were given a choice of completing six (6) of the eight (8) short answer compulsory questions in this section of the paper.

Question 1

High ratings were awarded if the candidate gave evidence of what high resolution actually was and described the benefits to the user. Typical high resolutions of 1280* 1024 and 1600 *1200 were the most popular resolutions that the student gave. Colour depth was mentioned by many and its relation to the resolution on the monitor and also the printed copy. Most students had some understanding of appropriate high resolutions available on contemporary printers, no mention was made of plotters in answers to this question.

Question 2

Most students knew about layers and many noted the value of layers to architectural plans and how the designer can clearly show various aspects of the design without unnecessary clutter. A number could only see the value of layers in regards to the number of storeys in a building design and did not mention various trades having their information and specifications on a unique layer in the technical plans. A number of students only referred to the layers available in photo and image editing software.

Question 3

Bezier curves were understood by the majority of students answering this question. Many students confused Phong and Gourard shading methods. Virtually all students were able to give clear concise answers to part C of question 3 referring to the jaggies.

Question 4

Many students described the 3.5in floppy and tape drives as the latest permanent storage devices – this is far from the truth. Most gave examples of DVD, CD-RW, JAZ, ZIP, Flash and/or bubble memory systems as the latest and most permanent storage systems. A small number said that the Internet offered storage of files and explained how they were portable by being able to access them anywhere around the world.

Question 5

Students who answered this question demonstrated a sound understanding of the purposes of processor caches. A number of candidates confused processor caching with Internet browser cashes indicating a serious lack of understanding.

Question 6

Students who answered this question mostly had a rudimentary understanding of the idea of fuzzy logic in aiding the photographer. High level answers gave a good description of how the photographer benefits by this new technology.

Question 7

Generally a well answered question with the majority of candidates demonstrating a sound understanding of the need for graphic standards and their origin.

Question 8

Students who had obviously used digital imaging techniques answered this question to a high level. The vast majority of candidates were only able to show a limited understanding of colour channels, filters and feathering.

Section B

This section is to test the problem solving capabilities of the students who had a choice of completing five (5) of the ten (10) short answer questions.

Question 9

Well answered – most candidates answering this question did so successfully showing all stages of top down design.

Question 10

Answered by very few candidates – not very successfully! Only one or two students gave a full answer in referring to the 'user forum' requirements in the whole office situation.

Question 11

This proved to be a good 'indicator' question, very few correct answers. Some students used the line rotation formula and a number used trigonometry to come up with a solution. Quite a large number of students made very poor attempts at the question with no real idea of a solution.

Question 12

Well answered by most students – all giving several criteria for software selection.

Question 13

Students that received a high rating mentioned pressure sensitive pads/tablets along with the use of a pen or stylus. One student mentioned a surface that simulated the resistance and drag of paper to help in the artists desire to be able to sketch satisfactorily on a computer.

Question 14

This was one of the most interesting questions to mark as practically all students answering this question had a high level of understanding of the latest technology used in the transfer of information across networks. High ratings were awarded to those students who gave local or national examples of the use of ISDN or ASDL systems.

Question 15

A small number of students could only suggest simple hardware solutions to the requirements of the clothing warehouse. A number were able to analyse the particular requirements of the computer aided manufacturing in the clothing industry.

Question 16

A small number of students mentioned vector scanning of 3D objects. Most associated the need for vector scanning with the updating of old plans drawn originally by draughtpersons. Raster scanning, an important step in the process was not included by many students answering this question.

Question 17

A well answered question with the majority of candidates demonstrating a sound understanding of the need for a range of measures to be put in place to limit 'down time' in the industry. High level answers spoke of network architecture, backup systems, power protection and technical support.

Question 18

Not a well answered question with many candidates unable to give a clear concise answer. High level answers showed a good understanding of hardware limitations, use of appropriate rendering and lighting algorithms and time factors in producing appropriate imagery.

Section C

Students had a choice of completing two (2) of the five (5) sketching questions in this section of the paper.

Many students had very poor sketching ability with a large number not using text, arrows, headings or even naming the views that they were trying to illustrate.

A very small number of students had outstanding sketching and high level creative abilities – these were very refreshing for the examiners to mark as most student could not think outside of the square when attempting their design sketches.

Question 19

Many of the gazebo designs were quite cliched with little evidence of innovative design. Sketching standards were generally average with only a few candidates showing some interesting and exciting ideas. Most candidates were able to produce the required number of views in a legible format.

Question 20

Some excellent sketches and very innovative ideas – some students only showed one design example for the required spectacles.

Question 21

Well answered – most students showing good layout and logical links to other features of the business and the home page.

Question 22

A number of students found it very difficult to draw in freehand to an appropriate scale that would show bathroom furniture layout and proportions. Some candidates only gave a suggestion for one bathroom and not for two as stated in the question.

Question 23

There were only a small number of high level answers to this question, most students attempted a reasonable layout to the landscaped garden though many solutions did not have the look or feel of a landscape plan, which probably means that very few had ever previously attempted a landscape design.

Section D

In the essay section students had a choice of completing only two (2) of the five (5) essay questions available. This allowed up to 45 minutes writing time for each of the essays which has given a much improved standard on previous years.

Question 24

Few candidates attempted this question. Most who did demonstrated a good level of understanding of the application of AI in the graphics industry both within software applications and in various industry examples.

Question 25

Attempted by only a few candidates and generally to a good standard with an awareness of the requirements of the equipment needed to produce and present suitable information for the builder to present to the client. High level answers demonstrated a system where the client themselves could customise the information to their own particular preferences within the broader concepts of the design.

Question 26

Most students could list a full selection of desired software and hardware. However, some did not refer to the link between the equipment and the companies prime output.

Question 27

Very well answered – extensive lists of techniques were mentioned by just about all students. Good detail was given on how these techniques could produce some very realistic imagery such as the use of resolution, radiosity, ray tracing, bump maps, lens flares etc.

Question 28

Those that gave good answers gave a brief history of graphic design and mentioned all of its aspects including computer graphics in the 70's and 80's through to present day graphics.

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