



Curriculum Council
Government of Western Australia



APPLIED INFORMATION TECHNOLOGY SAMPLE MARKING GUIDELINES

Markers please note: The marking guideline provided is not intended as a set of model answers, and is not exhaustive as regards to alternative answers.

Only whole marks are to be awarded. No half marks or partial marks are to be given to candidates as the total of the examination is worth 200 marks. For example, if a question is allocated 3 marks, a candidate may be awarded 0, 1, 2 or 3 whole marks for this question. Candidates should not be awarded half or partial marks, such as 1 ½ or 2 ½ marks.

Teachers who use this guide should do so with its original purpose in mind.

SECTION ONE: MULTIPLE-CHOICE

(20 MARKS)

Each question is worth **one** mark.

1. Which of the following is a true statement about a database?
 - (a) the records in one table may not relate to records in any other table.
 - (b) each department or area within an organisation might have its own set of tables.
 - (c) data is stored in separate tables so it is difficult to access and can be isolated.
 - (d) the data is stored in a group of related fields.**

2. If a designer wanted to email a colleague some sample designs for review, what should she do to her graphic files?
 - (a) Compress the file in a .zip format.**
 - (b) Encrypt the file in 8 bit format.
 - (c) Compress the file as a .tiff (tif).
 - (d) Send the file in a raw file format.

3. The best way without cabling, to network computers throughout your home is through:
 - (a) a DSL modem.
 - (b) an ISDN modem.
 - (c) a network card.
 - (d) a wireless router.**

4. What are the most important criteria you would use when evaluating an internet information source?
 - (a) editorial style of the website, number of hits, look of site
 - (b) identifiable author, currency of information, editorial style**
 - (c) identifiable author, number of hits, look of site
 - (d) look of site, identifiable author, currency of information

5. A designer wanted to save a colour photograph so that it had the highest possible quality with the lowest possible file size. Which would be the most appropriate file format?
 - (a) jpeg (jpg)**
 - (b) bmp (pict)
 - (c) gif (gif)
 - (d) tiff (tif)



Image one



Image two



Image three



Image four

6. Which one of the images above demonstrates the basic design principle of repetition?

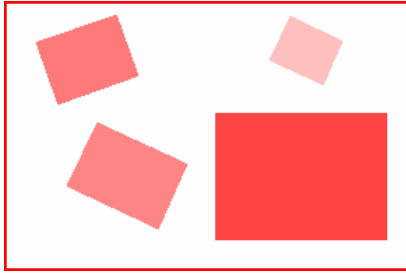
- (a) **Image one**
- (b) Image two
- (c) Image three
- (d) Image four

7. Which one of the following file formats allows for transparency once exported?

- (a) jpeg (jpg)
- (b) **gif (gif)**
- (c) bmp (pict)
- (d) tiff (tif)

8. Using a form on a website is an example of

- (a) **data security.**
- (b) data entry.
- (c) validation.
- (d) disposal/archiving.

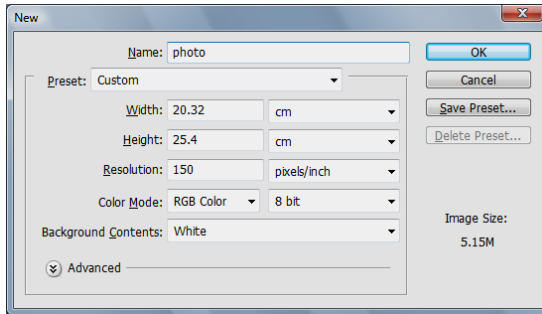


9. The above two images demonstrate a principle of design. This is the principle of
- (a) symmetry.
 - (b) repetition.
 - (c) balance.
 - (d) emphasis.**
10. Which one of the following statements is **false**?
- (a) A bridge is a device that connects and passes packets between two network segments on the same network that use the same communication protocol.
 - (b) ISDN stands for Internet Services Digital Network.**
 - (c) A router is a device that connects any number of LANs.
 - (d) A hub is a device used to create a small-scale network by providing a common connection to all devices on the network.
11. What is the most secure way to protect your digital data on the internet against unauthorised access?
- (a) strong encryption**
 - (b) password protection
 - (c) biometric device
 - (d) computer lock
12. What part of a computer holds the data only temporarily?
- (a) hard disk drive
 - (b) central processing unit
 - (c) primary storage**
 - (d) secondary storage

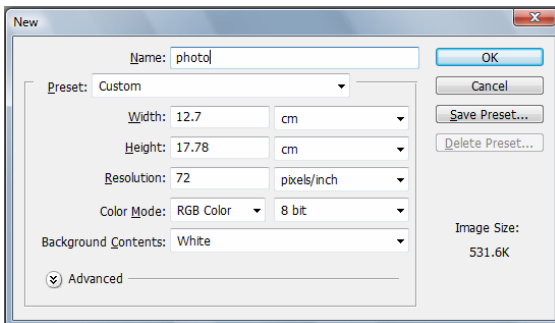
13. What Federal Government Act provides an employer the opportunity to observe his employees' 'work related' productivity?
- (a) Freedom of Information Act
 - (b) Privacy Act**
 - (c) Workplace Relations Act
 - (d) Public Works Act
14. A student wants to choose a storage format for a photo story she has produced which has a file size of 900 000 kilo bytes. Which would be the most suitable storage medium?
- (a) Floppy Disk (1.44 MB)
 - (b) CD-RW (800 MB)
 - (c) DVD-R (4.7 GB)**
 - (d) USB (Flash or Thumb) Drive (256 MB)

15. A publicity officer employs a photographer to take some promotional photographs at a product launch. As the photos need to be used in various screen and print publications, the following screen shots show characteristics of differing file formats. Which one of the following formats should the publicity officer choose to receive the photos for maximum versatility?

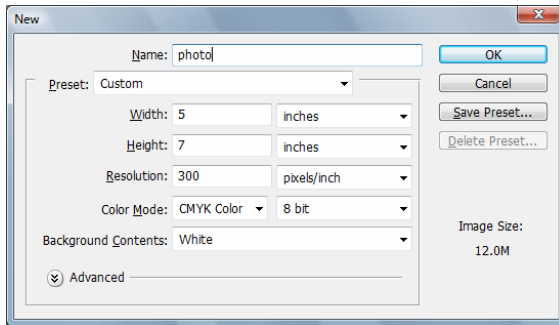
(a)



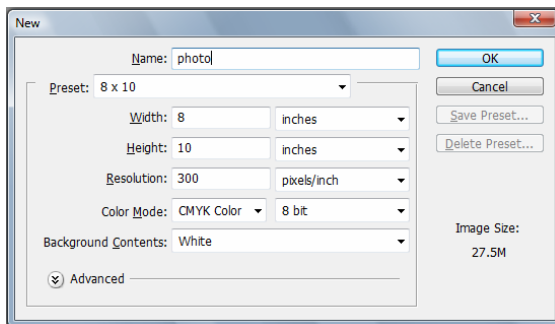
(b)



(c)



(d)



16. Complete the sentence with one of the words below.

A web site that uses _____ to secure its data is known as a secure site.

- (a) hypertext
- (b) decryption
- (c) encryption**
- (d) passwords

17. Employers aim to provide optimum work conditions to ensure greater work efficiency and ensure employee comfort. Consultants were asked to submit four recommendations to reduce eye fatigue. Which one of the following recommendations would be the most effective to reduce eye fatigue?

- (a) Regular breaks and eye exercises, ergonomic workstation design, limit monitor glare and reflection, 19" LCD monitor.**
- (b) Regular breaks and eye exercises, ergonomic workstation design, limit monitor glare and reflection, 19" CRT monitor.
- (c) Regular breaks and eye exercises, ergonomic workstation design, fluorescent lighting, 19" monitor.
- (d) Two minutes break every 30 minutes, ergonomic workstation design, natural lighting, plasma screen.

18. The Australian Federal Government has recognised the need to protect consumer interest by passing legislation to enable CD owners to copy recorded music they own so that it can be played on their own MP3 devices.

What is the correct term used in the Australian Copyright Act of 1968 to describe this practise?

- (a) Common Use
- (b) APRA Licence
- (c) Fair Dealing**
- (d) Public Domain

19. Which system would you recommend to a website developer who produces their own graphics?

- (a) Dialup 56Kb, 512 MB RAM, 2.6 GHz processor, 20 GB Hard drive
- (b) ADSL 512Kb/s, 2 GB RAM, Intel Duo Core 2.16 GHz, 80 GB Hard drive**
- (c) ADSL 512 Kb/s, 256 MB RAM, Dual AMD 2.01 GHz, 100 GB Hard drive
- (d) Dialup 56Kb, 2GB RAM, AMD 2.01 GHz, 10 GB Hard drive.

20. Which one of the following is **not** a type of backup?

- (a) differential
- (b) incremental
- (c) internal**
- (d) full

END OF SECTION ONE

Question 1

(5 Marks)

A company provides all new employees with a booklet relating to the appropriate use of ICT within the company.

- (a) Explain why the company provides new employees with this type of booklet. (2 marks)

<i>To ensure all users are aware of policies and procedures pertaining to use of ICT. This type of booklet clarifies the standards of employees in the performance of their duties.</i>	(1 mark)
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<i>To ensure all users are aware of conduct that is appropriate – protect the organisation from legal action. It gives guidance in areas of ICT where staff need to make personal and ethical decisions.</i>	(1 mark)
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- (b) List three distinctly different rules and provide a reason why each rule should be included in a booklet relating to the use of ICT within a company. (3 marks)

<i>Any three of the following areas, for a maximum of 3 marks.</i>	
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Privacy <i>“users must not allow the company’s ICT facilities to be used by anyone other than those authorised to use them” that is family members or friends. Otherwise the information/ICT resources could be used for something illegal.</i>	(1 mark)
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Access the internet <i>“users are forbidden to access, transmit or store pornography” otherwise the company may be liable for sexual harassment if it allows this to happen</i>	(1 mark)
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Security <i>“the use of another person’s logon details is strictly prohibited” as this may mean someone can access data they would not normally be able to access.</i>	(1 mark)
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Respect for Intellectual Property <i>“You agree to respect the intellectual property rights of others.”</i>	(1 mark)
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Emails <i>“Users should not email anything that they would not sign off in a memorandum” it is legal and binding and it is important to use proper netiquette so as to minimise offence and represent the company professionally.</i>	(1 mark)
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Copyright <i>“users should not use ICT resources in a manner that infringes copyright” as the company may be held to be liable. By putting it into a rule book, the individual becomes responsible and breaches have clear sanctions.</i>	(1 mark)
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Bullying <i>“Using ICT resources to harass, threaten, defame, vilify or discriminate against any group or individual”</i>	(1 mark)
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Damage <i>Causing intentional or irresponsible damage to ICT resources, or stealing equipment</i>	(1 mark)
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Question 2

(5 Marks)

You have been employed to evaluate ACME Solutions' expanding ICT requirements. Sales Consultants require access to the internet and ACME's documents with customers whilst off-site. Your solution is to incorporate digitally converging technologies for use by the sales consultants.

- (a) Explain what digital convergence means and give an example. (2 marks)

Merging of common digital devices with PC technology making them more accessible, affordable, usable etc. (1 mark)

The technological trend whereby a variety of different digital devices such as televisions, mobile telephones, and now refrigerators are merging into a multi-use communications appliance employing common software to communicate through the Internet. (1 mark)

1 mark for example. e.g. mobile phones that have become smart phones that allow for internet access and email access and interactivity. Taking on characteristics of PC

- (b) Using a PDA or smart phone (or other reasonable use of technology), explain how digital convergence could assist ACME Solutions. (3 marks)

*Candidates must address the following **three** areas in order to be awarded full marks.*

Mobility (1 mark) + Flexibility of access to clients (1 mark) + decreased physical costs of providing office (1 mark)

Also increased data transfer rate is appropriate (1 mark) (3 marks)

Explanations may include:

By providing their sales representatives with a smart phone or PDA, ACME is providing continual access to company data and internet information including emails.

Question 3**(5 Marks)**

You have been asked by a friend to provide some advice regarding security and different types of software licensing for their new computer. The computer has internet access and will be used for both home and business purposes.

- (a) Explain, using examples, key differences between freeware, shareware and proprietary software licenses. (3 marks)

Candidates must **identify key differences** and provide an **example** for each of the following to be awarded full marks. Possible answers may include:

Freeware – software that can be downloaded without payment and without restrictions. Some free virus protection programmes eg AVG. (1 mark)

Shareware – Software on the "honour system." The concept is that users try a product, and if they like it, they voluntarily pay a set registration fee or make a donation to the program's creator. A lot of shareware has evolved into trial versions and light versions. (1 mark)

Proprietary – Purchase this software from retail outlets or registered distributors. The software is owned by the developing company. eg. Microsoft software.. (1 mark)

- (b) Your friend is also concerned about how she can protect her computer and personal information against malicious software. What is malicious software and what measure can she take to protect herself against it? (2 marks)

Definition (1 mark), any one of **preventative measures** (1 mark)

Answers may include:

Malicious software is software that is damaging to the computer. It is usually in the form of a virus/ worm/ Trojan. (1 mark)

Examples: To prevent malicious software from corrupting a computer system.

- install protection software
 - block pop ups
 - have spam guard in email software
 - do not download from unknown sites
 - install personal firewall
 - watch for unusual activity on computer
 - set browser settings so you are notified if there is a download attempt
 - turn cookies off
 - read download agreements because some contain clauses that allow companies to install corrupting software.
- (2 marks)

Question 4**(5 Marks)**

A travel firm *Land Ahoy!* has awarded you and your team with a contract to create an interactive product as well as ideas for marketing merchandise. However, prior to commencing this work, it is essential that the people working with you have a clear understanding of the terminology that they will be using.

(a) Select four (4) selected file extension types from the following list: (4 marks)

- .jpeg (jpg)
- .gif (gif)
- .bmp (pict)
- .tiff (tif)
- .avi
- .wav

- (i) Define the four (4) file extensions.
(ii) Why would you use these types of files?

Candidates must answer both parts of (a) to be allocated whole marks. i.e., software created and working file type to a maximum of 4 marks.

Answers may include:

Candidates must answer both parts of (a) to be allocated whole marks. i.e., software created and working file type to a maximum of 4 marks.

Answers may include:

.jpeg (jpg)– would be used with any type of raster editing software. Working file will be same as export file unless originally working in another raster format and compressing to jpeg in which case will be smaller. Eg camera/web

.gif (gif) – would be used with any type of raster or vector editing software. Working file will be same as export file unless compress further eg web

.bmp (pict) – would be used with any type of raster editing software. Same can be exported as .bmp so working file will be same as export file – usually large though. This file is an uncompressed format.. Eg Paint/scanner

(4 marks)

***BMP** is an uncompressed proprietary format invented by Microsoft. The files typically are very large as it stores pictures as uncompressed graphics. **PICT** Files in PICT format resemble files in TIFF format but mostly used by Macintosh applications. This format ensures lossless compression which makes the file sizes quite large*

.tiff (tif) – would be used with any type of raster editing software. Same size working file as exporting file eg PrePress/ images of high resolution but need to be stored in a compressed format

.avi – would be used with file type that can be edited in many video editing software including Premiere. Working file is same as export file. This file type is an uncompressed format. Eg video

.wav – (WAVE) stands for Waveform audio format file format standard for storing audio. Eg sound files Used mainly in windows PC's commonly used for storing uncompressed CD quality sound files which means that they can be large in size.

- (b) File types such as jpeg(jpg) use lossy compression. Explain this concept. (1 mark)

1 mark definition + **1 mark** reason

Definition: Lossy compression compresses the file permanently and eliminates some information in order to achieve a smaller file size.

It may be necessary to export a particular file type in a different format due to reasons of (1 mark).

1. **file size** over any WAN/LAN or
2. **editability** with other editing software.

Question 5 (5 Marks)

- (a) What is Occupational Overuse Syndrome? (2 marks)

*Answer should show recognition that Occupational Overuse Syndrome is **an injury** (1 mark) caused by poor work setup and **poor working conditions** (1 mark)*

Answers may include:

*The name given to a **range of conditions characterised by discomfort or persistent pain** in muscles, tendons and other soft tissues. These conditions are usually caused or aggravated by **poor work processes and unsuitable working conditions** that involve repetitive or forceful movements or the maintenance of constrained or awkward postures. OOS is also known as Repetitive Strain Injury (RSI).* (2 marks)

- (b) List three examples of how Occupational Overuse Syndrome can be reduced in the workplace. (3 marks)

*Candidates should identify **three** of the following in order to be awarded full marks (1 mark per correct response to a maximum of 3 marks)*

1. *Workstation design*
 2. *Monitor height*
 3. *Chair height*
 4. *Elbow position*
 2. *Regular changing of position*
 3. *Refocussing eyes and looking in the distance*
 4. *Stretching*
 5. *Correct lighting*
- (3 marks)

Question 6**(5 Marks)**

- (a) What is meant by 'inclusivity' in ICT and why is it important? (2 marks)

1 mark for **definition** + 1 mark for **explaining its importance**.

Answers may include:

*Inclusivity is about ensuring access to ICT solutions for all. It is important that people with disabilities or other minority groups have access to the benefits associated with ICT use otherwise they are **marginalised without access to important information, training and services. Information rich v information poor. Digital Divide*** (2 marks)

- (b) Identify three disadvantaged groups and for each group provide one example of an ICT solution that enables easier access. (3 marks)

Full marks for **category** and **solution**. e.g., category: vision impaired + solution: user control of fonts/styles/colours

- online shopper with colour blindness (user control of font style and colours)
- Office worker with repetitive stress injury (keyboard equivalents for mouse-driven commands; voice recognition etc.)
- deaf student (sound clips with sub-titles or captions)
- accountant who is blind (Braille display, speech recognition)
- student with dyslexia (tinted screens, supplemental graphics; freezing animated graphics; multiple search options)
- Senior citizen with deteriorating eyesight (screen magnification; avoiding pop-up windows)
- Student vision impaired – Braille interpreters
- Making broadband access available to all including remote country towns (3 marks)
- Educate the unemployed and elderly to have confidence in using the internet as a means of removing the barrier to access to government and commercial e-services
- When creating Images and animations for the web use the alt attribute to describe the function of each visual.
- Create Image maps. Use the client-side map and text for hotspots. Client size means that it is device dependent-access for all users not dependent upon hardware
- Multimedia. Provide captioning and transcripts of audio, and descriptions of video.
- Allow for a number of languages

Any other reasonable example which clearly itemises both category and solution, should be recognised with appropriate marks.

END OF OPTION A

Questions 1, 2 and 3 are the same as Option A

Question 4

You have been asked to research game consoles and decide to use Blog websites, moderated user forums and online Encyclopaedias.

- (a) Explain what each source is, in terms of the quality of information it provides. (3 marks)

*1 mark for each good **definition** and a **statement** about the quality of information it provides.*

Answers may include:

Blogs: Short for "Web log," A frequently updated internet (web) journal or diary usually, often hosted by a third party. Un-edited and usually opinion. (1 mark)

Moderated online forums: are a means for threads started by the community. Community members can post replies to existing threads and start new threads as they wish. A forum administrator has the ability to edit, delete, move or modify any thread on the forum. (1 mark)

Online Encyclopaedias: are written by a staff of full-time editors and many expert contributors. They are widely seen as accurate and scholarly. (1 mark)

- (b) What dangers exist in using some of these sources by people looking to make an informed decision? (2 marks)

*1 mark for each **expressing a perceived danger** but each must be supported by **justifications** as to why they believe it is a danger.*

e.g. self diagnosis of a health issue from comments read off a Blog site on some ones own experiences with a particular health issue. This could be dangerous as information is not from a medical practitioner and any medication suggested could be fatal. (2 marks)

Question 5

A school is considering listing an MP3 player or similar pocket sized device on the students' stationery list.

- (a) Identify four (4) issues and justify why the school should or should not encourage parents to purchase these devices. (4 marks)

For each issue given, students have to provide justification as to why they believe it could be an issue for parents to purchase this type of device.

1 mark each for a valid issue and its justification to a maximum of 4 marks.

Some examples:

- 1) Transferability: easy to make copies*
- 2) is able to read videos, play music, audio books and display photos, has voice recording-digital dictaphone*
- 3) Copyright infringement could be exacerbated*
- 4) Media: delivery is now common as podcasts*
- 5) Can connect to a big screen or projector*
- 6) Integrated FM radio*
- 7) Personal information manager*
- 8) Size: no need to carry heavy books*
- 9) Data can become corrupted*
- 10) Loss of information or player*
- 11) Safety / security: students could become targets of thieves*
- 12) Cost: some parents could not afford the cost*
- 13) Cheating*
- 14) New copyright protection software to bought music can stop file transfers*

(4 marks)

- (b) You endeavour to transfer files to your computer from your MP3 player but cannot do so. Apart from corruption, what could be the cause of the problem? (1 mark)

Any reason that would be possible should be accepted.

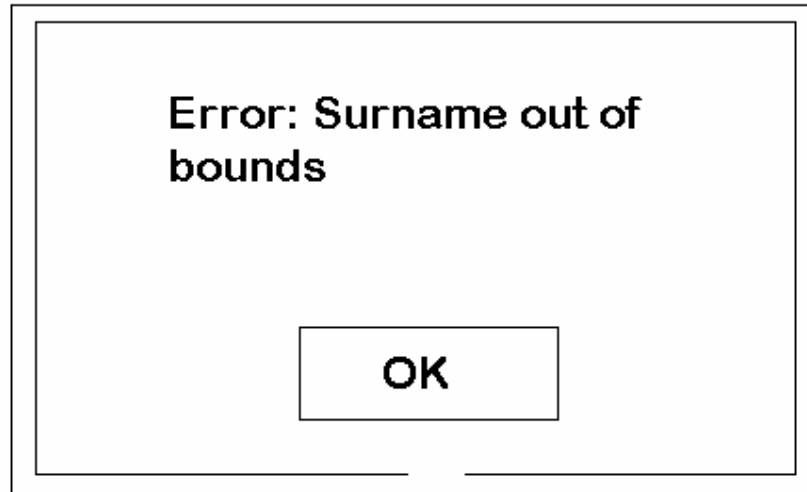
Some possible reasons may include:

- 1) Different file system between the computer and the MP3 device.*
- 2) Hardware failure.*
- 3) The computer has no free space available on its hard drive.*

(1 mark)

Question 6**(5 Marks)**

Gerry Angalopoulos was trying to complete an online job application form from a prospective employer website. He correctly fills in the required information which is; Name, Surname, Address, Suburb and Contact phone number. However, when Gerry presses the 'submit' button to advance to the next stage of the online application, he receives an 'error' message, which is outlined below, and this prevents him from submitting his application.



- (a) Explain what is the possible cause for this error. (1 mark)

The surname, (Angalopoulos) is too long for the field/entry storing the data. (1 mark)

- (b) Outline two (2) ways for troubleshooting this situation that would provide the user with a better outcome? (2 marks)

1 mark per correct reason. Possible reasons include:

- 1. Provision of more meaningful message.*
- 2. Truncation of the surname and automatic processing*
- 3. Indicating that the surname only takes/needs 12 characters.*

(2 marks)

- (c) Should this type of error be considered as an indicator for re-looking at the system design? Provide one (1) reason to explain why this would be necessary. (2 marks)

1 mark for "Yes" and 1 mark for correct reason, such as:

Yes it should be considered as part of a maintenance/review cycle so that users can input data correctly. (2 marks)

Questions 1, 2 and 3 are the same as Option A

Question 4

(6 Marks)

State in terms of cost or functionality three possible advantages and three disadvantages of multiple stand alone workstations compared with multiple networked computer workstations for a local business.

Candidates must provide three advantages and three disadvantages to be awarded full marks.

Some responses may include:

*Network can allow file, print and hardware sharing - anything to do with sharing resources **2 marks** can be cost or functionality*

*Makes collaboration easier - functionality **1 mark***

A Network can be more expensive-cabling and server infrastructure as well as Network Server software costs, however software licensing is easier to manage as usually less expensive when compared to purchasing stand-alone versions of software

(6 marks)

*Downside is cost of employing expert help to manage network **1 mark***

*Standalone PC everyone needs to be able to troubleshoot and will need own connect to internet/printer- not likely in this large environment – they would need to employ a technician/help desk support anyway. **1 mark** cost.*

*Standalone – user has more control, network control can be hierarchical. **1 mark** functionality.*

Internet access can be centralized therefore more likely to be secure with firewall software/hardware attached to network infrastructure e.g. router

Question 5**(4 Marks)**

A job advertisement for an ICT position requires applicants to detail their ICT skills. In terms of current industry trends, discuss the ICT skills that the employer could be seeking in applicants.

*Student responses will vary. The following is a guide only, modelling the depth of responses needed in order to achieve **2 marks**.*

*ICT jobs are customer focussed and therefore communication skills are very important. With development of website technologies, client requirements important and ability to speak to client vital - communication skills. Examples of ICT jobs are: help desk support-call centres - sales **2 marks***

*ICT workers require flexibility. Technology in hardware and software is evolving very quickly so employees would need to be quick adopters and flexible in looking for solutions amongst new technologies. Flexible early adopters with examples – **2 marks**. (4 marks)*

ICT jobs Require high degrees of computer literacy

ICT requires employees. Familiarity with new converging mobile technology which would encourage e-working, or web commuting utilizing mobile telecommunications technology to work

Question 6**(5 Marks)**

In working to design a new corporate identity for a business, talking to your client and asking the right questions are the keys to producing a quality product that meets the needs of the client. What questions would you ask your client when developing your design brief and why?

The following answers are a guideline, but it is essential that the target market is identified.

*Who is your target market? This is the first place to start – sets design focus (1 mark)
1 mark.*

*What was the previous corporate identity – what did you like/dislike. – reference to previous/existing templates etc. **1 mark** establishing colour scheme etc. (1 mark)*

*What corporate identities do you like (preferably a little research would have been done and samples would be taken in of other companies in similar area) so get understandings of client preferences **1 mark** (1 mark)*

*What components are required to be developed – sizes, resolution, quality, print, colour etc, file formats. **1 mark** – is it a website/company header/business card/television presence etc. (1 mark)*

*How much money are you willing to spend. Need to be upfront **1 mark**. (1 mark)*

*What is the public perceived image of the company? (e.g. company name associated with) **1 mark***

END OF OPTION C

Question 1

(25 Marks)

Mr Johnson's Applied Information Technology class has been instructed to create a website about their favourite place. The class have completed an activity about Australian copyright law and Mr Johnson warns the students that marks will be deducted from their final score if the students infringe copyright in the task. Not wanting to jeopardise his grade, Barry Barnes persuades his parents to drive him to his favourite place and takes a number of photographs to use on his website.

When the students present their finished site to the class, Barry notices that Molly Morton has used a number of pictures on her website that he knows must have been taken by a professional photographer and she has not cited the source of the images. Barry complains to Mr Johnson that he thinks Molly has used copyrighted images on her website. Molly defends herself, claiming that she got the images off a government website and was allowed to use the images without restriction because they were in the public domain.

- (a) Explain what 'public domain' means. (1 mark)

Work is said to be in the public domain if it has **no copyright** attached or **copyright has expired** i.e. after 70 years. (1 mark)

- (b) Is Molly's belief that images on a government website are in the 'public domain' correct? Explain why Molly may or may not be correct. (6 marks)

No it is not correct. (1 mark) (1 mark)

If student identifies difference between public domain and publicly available (2 marks) (2 marks)

Explanations can include
 Some Government documents or agencies are not subject to copyright and are publicly and freely available for download and/or copying as they are in the public domain however government owns copyright of images therefore permission to use via website terms and conditions must be granted. (3 marks) (3 marks)

- (c) How does the Copyright Act of 1968 register and manage copyrighted materials in the 'public domain'? (4 marks)

There is no process to manage copyrighted materials in the Public Domain (1 mark)
There is no process to register copyrighted materials in the Public Domain (1 mark)
There is no process to manage copyrighted materials publicly available. (4 marks)
It is up to individual who owns copyright. (1 mark)

Public Domain means the copyright is nullified, so there are no copyright issues.(1 mark)

Maximum four marks. Question is deliberately worded to challenge students and bring out understanding of what 'Public Domain' is and how Copyright Act does not manage copyright materials it just sets the law/guidelines.

- (d) If Barry is correct, and Molly's use of the photographs infringes the Copyright Act of 1968, discuss five (5) possible ways in which Molly could make her website comply with copyright legislation. (5 marks)

Candidates will need to identify 5 ways in order to be awarded full (5) marks. i.e. 1 mark per correct response.

Answers may include:

By reading the terms and conditions of the site where the images came from may mention whether photos can be used under what circumstances. It may give permission to use.

Copyright belongs to the Commonwealth or Government in charge of website. Government department cannot own website – Commonwealth/State does so Molly should obtain the owner of the copyrights' permission to use the images by emailing or writing letter.

Fair use/Fair dealing as long as Molly is only using the website for research, study or review, then she may be exempt from copyright under the Fair dealing provision of the Copyright Act. (5 marks).

There are also special provisions in the Act for Educational institutions whereby if the material is being used for instruction then generally permission is not needed from the creator.

She could replace the pictures with one of her own.

She could significantly alter images as long as edited pictures were not recognised as coming from copyrighted pictures when placed side by side with originals.

She could seek licencing either through payment or permission.

- (e) Explain what a cascading style sheet is and give an example. Why would web-designers advise Molly to use cascading style sheets in her website? (3 marks)

1 mark for definition: *A document/template containing standardised styles*

1 mark for a correct example (3 marks)

1 mark for justification: *e.g. you would use them to ensure design consistency because they are efficient 'concept of reuse'*

- (f) Websites which have a lot of visual content can cause problems for some viewers. Why is it important that Molly's website be accessible by all users? (2 marks)

1 mark per appropriate reason, such as:

So that the website is inclusive, e.g. access for disabled, vision impaired etc. (2 marks)

Allowing greater access to a wider market

- (g) Give four (4) measures that Molly could incorporate into her website design to allow ease of access for all users? (4 marks)

1 mark per appropriate suggestion, such as

A choice of languages

Larger text

Image maps with alt+text

A program to read the text

Output it to a sound card

Careful choice of colours

Appropriate and selective use of sponsors/advertising

Page layout

(4 marks)

Question 2**(25 Marks)**

The Riverview Restaurant has recently changed from using a handwritten meal ordering system. The restaurant has installed a computer-based meal ordering system for wait-staff to enter customer orders into a small hand held device.

- (a) Identify three advantages and three disadvantages of implementing this type of system. (6 marks)

Candidates must provide 3 advantages and 3 disadvantages to be awarded full marks. Allocate 1 mark per correct advantage/disadvantage to a maximum of 3 marks per category. Answers may include the following:

Advantages:

Better input quality as opposed to reading and writing handwriting. (3 marks)
Waitpersons don't need to deliver order to kitchen and bar, only pick up so time saved in this regard
Stocktaking done in real time so better able to order stock as required.
Bill is calculated automatically, so time savings here as well.
Management has a right to monitor performances of staff so staff monitoring is an advantage

Disadvantages:

Cost of implementation. (3 marks)
Were staff advised that this is what the data was being used for if not then may be infringing on staff's privacy
What sort of data is being collected to monitor performance over what timeframe – could have a bad day – toilet breaks – is this then used and is it fair.
Hardware failure
New and relief staff require training

- (b) The management of the restaurant has noticed that people are embracing technological change more readily, in their personal, social, economic and community lifestyles. Discuss these trends. (8 marks)

The following information is a guide only. Any answer that formulates a reasonable discussion of all four parameters should be awarded full marks. (2 marks per engagement with each context)

Personal – People are exposed to technology everyday, for example turning on their TV and programming their video. Technology is mandatory, constantly in-flux and updated. (2 marks)

Social – Gen Y are used to dealing with technology, as it has been normalised since childhood. The wait-staff are young and familiar with technology (2 marks)

Economic – It may save money in terms of creating efficiencies relating to speed and time associated with writing. Inputting of data into the hand-held devices may save time and money and minimising errors. (2 marks)

Technological – the technology is available and becoming more affordable for businesses to adopt. Gen Y are increasingly savvy in its use so training costs would be minimal. This also ensures economic savings. (2 marks)

Also acceptable:

*Technology makes learning new things fun in an interactive way
Respond to learning with visual and audio cues*

- (c) As the restaurant staff is now using the hand held devices, what type of network would most likely be used? (1 mark)

Wireless (1 mark)

- (d) Using the hand held device, list a possible

- (i) data input; (1 mark)

screen capture or keypad entry on PDA or other device. (1 mark)

- (ii) output which could be both printed and electronic. Detail the information that could be stored. Give two (2) examples. (2 marks)

1 mark per correct example, for a maximum of 2 marks.

Answers may include:

Output: customer bill printed detailing cost of order from input, stock figures (maybe electronic), output on LCD screen when entering order. Location of table could lead to analysis of popular seating arrangements. Number of customers per order (2 marks)

- (e) List and describe other examples of portable computer technology that could assist different types of businesses to deliver their services or products. (3 marks)

There are many possible answers. Award 1 mark for a correct identification + 1 mark advantage + 1 mark disadvantage.

For example: (3 marks)

*Hand held device: Car engine diagnostics
Advantage: speed and accuracy
Disadvantage: cost and re-training required*

- (f) Environmental issues are a major focus nowadays. What impact, both positive and negative, could the restaurant's hand held device have on the environment? (4 marks)

1 mark should be awarded for each of the reasonable response which may include:

Positive

- *Reduce paper use* (2 marks)
- *Reduce overall waste*

Negative

- *Increased energy use*
- *Need to dispose of electronic waste safely* (2 marks)
- *Need to dispose of batteries*
- *Components of these devices are toxic and have carcinogens*

END OF OPTION A

Question 1

(25 marks)

ICT as a marketing / advertising tool is becoming a dominant means by which businesses inform potential customers of their products and services, especially through the Internet.

- (a) If companies wanted to advertise their products and services locally and nationally, what ICT services and infrastructures in Australia could they use? (5 marks)

A variety of IT infrastructure and Federal / State and Local government plus business initiatives can be listed. 1 mark for each if answers can be clearly identified as "local, national ICT structures".

(5 marks)

e.g. mobile phone networks, telephone networks, broadband both cable and wireless. ISPs Libraries, Internet Cafes, Universities, TAFE etc.

- (b) Discuss the impact that five (5) local and/or national ICT structures have on a businesses ability to get their product / services advertised to specific communities in Australia (15 marks)

1 mark for identifying the impact + **2 marks** for justification

The discussion must address the positive and negative impacts of local and/or national ICT structures.

Each impact mentioned must be justified as to why it is seen as an impact to specific communities (these communities must be stated in the discussion). (15 marks)

3 marks for each stated ICT structure, its impact, and a justification. All 3 parts (ICT structure, impact and justification) must be present to gain the marks

- (c) Why is Internet marketing/advertising becoming an essential medium for businesses to use? (5 marks)

1 mark for each reason with each being supported by a justification as to why candidates believe it is becoming an essential medium.

e.g. Reduced cost in advertising, larger potential market, cuts out the need to have stores in other parts of the country. No need to maintain stores in expensive areas. Ability to link advertising to social networking sites. (5 marks)

Question 2**(25 marks)**

A group of students have created a multimedia presentation using footage they have captured and edited themselves. It has been saved in full quality PAL DV format on the hard drive of one of the school's computers. Their teacher wants the multimedia presentation to be available in a suitable format for them to view on their portable devices. (eg: phones.)

- (a) What name is given to a technique to make a file or a data stream smaller for faster transmission or to take up less storage space? (1 mark)

Compression/ zipping

(1 mark)

- (b) What specific form of this process would be used in the case described above, and what is its key processing feature? (2 marks)

Lossy compression (1 mark); **discards redundant data** (also uses JND thresholds to create acceptable, but not high quality, versions) to create Mpeg versions (1 mark).

(2 marks)

- (c) Outline the steps involved to convert the high quality multimedia presentation file to a format suitable for viewing on a portable device. Use correct terminology and technical details to support your statements. (12 marks)

Important points (1 mark for key point, 1 mark for example)

- **Check format required by mobile device** (mention of common **MP4 or 3GPP; wmv and Flash** could be acceptable answers for some smart phones)

Technical changes to the file to reduce the file size:

- **physical size; resolution (720x576 to 160x120 pixels)**
- **stereo to mono, 16 bit to 8 bit, 44 to 22 KHz; reduced sample rate**
- **frame rate from 25fps to say 10 or 15fps**
- **colour depth (millions to hundreds)**

(12 marks)

Extra issues (1 mark each up to 2 marks)

- **Check availability of software, hardware, disk space, connection cables. Get if necessary.**
- **Open presentation in suitable application and select EXPORT or SAVE AS or SHARE to and select the correct format (MP4 or 3GPP)** (could have been given a mark earlier)

Check the resultant file size is small enough to transfer and fit in device's memory. If not, change the settings and further compress until it is suitable.

- (d) List the hardware and software you would use to complete the conversion outlined in part 2(a) above, giving specifications and the way they will be used. (6 marks)

any 3 + any 3 for a maximum of 6 marks

Software applications to:

- Open the original presentation and **export it** (ie: it has **compression settings available**) (Eg: PPT, iMovie, Premiere, Final Cut Pro, MovieMaker, ULead Studio, QuickTime)
- **Check** the available storage space on the device (Utility)
- **Check** the available storage space on the hard disk (Utility)
- **Check** the connection between source and target ready for transfer (Utility) (3 marks)
- **Transfer file** to device (eg: Bluetooth installed or proprietary device software (eg: Nokia suite)
- **Play** the media on the device

Hardware required to:

- **Process conversions** - Fast processor would save time during compression (eg: quad core and and 1 Gb RAM)
- **Store** - Sufficient disk space to save new version of movie
- **Deal with AV** - Has sound card and video card
- **Store on device** - Sufficient in-built memory or a decent capacity memory card to accommodate new file (3 marks)
- **Connect devices** - Cable connection or Bluetooth; both require correct settings

- (e) Discuss what issues you would encounter in terms of viewing quality between the original and the final converted production. (4 marks)

any 4 of the following for a maximum of 4 marks

- Smaller size and lower resolution makes **viewing more difficult**. Won't be comfortable to watch for so long.
- Could be **"jumpy"** because of lower **frame rate**
- Could be **"jumpy"** because of **ability of device** to deal with file size of media
- Colours – fewer shades, **less colour definition** (4 marks)
- Annoying **Pixelation** visible
- **Audio will be thinner**
- Different conversion software and codecs may give better or worse results after conversion; different devices may have better or worse processors to deal with playing video/audio
- Any **interactivity will be lost** (becomes linear media)

END OF OPTION B

Question 1

(25 Marks)

Read the article below and answer the questions which follow.

Mobile apps slow business uptake

Jennifer Foreshew | *September 25, 2007*

MOBILE penetration in Australian businesses is an "escalating phenomenon", but mobile service providers are missing a major market opportunity, according to research.

The study, by analyst IDC, finds there is a large latent base of business users in need of mobilisation, and singles out first-time adopters of mobile communications and those who want to use mobile data channels more effectively with mobile email, internet protocol PBX directory functionality, and mission-critical business applications.

The report, *Australia Business Mobile Vertical 2007-2011 Forecast and Analysis: Me Against The World*, finds that businesses spent \$4.25 billion on mobile voice, messaging and data services last year.

IDC Australia mobile and wireless research analyst Jerson Yau says it is crucial that mobility stakeholders inform the market of the benefits of mobility in a business context.

He says mobile systems and services that deliver a tangible return, improve cost efficiencies and offer a high level of manageability will have universal appeal among organisations irrespective of their particular industry or size of operations.

The report predicts there will be greater demand by the management hierarchy and workforce on the ground to mobilise business applications and processes to take advantage of the perpetually connected nature of mobile services.

It also forecasts that mobile non-voice services will experience double-digit growth over the five-year period and across all business verticals.

Professional services, manufacturing and primary industries, and the retail and wholesale sectors are leading spenders on business mobile services, the report says.

The large public sector, covering government, education and healthcare, is the mid-market with a blend of "leading and lagging" usage.

Australian IT.

Foreshew, J. (2007, September 25). *Mobile apps slow business uptake*. Retrieved February, 2008, from Australian IT website: <http://www.australianit.news.com.au/story/0,24897,22473261-15306,00.html>. © News Limited.

- (a) The article refers to 'mobile systems and services'. What are 'mobile systems and services'? How would the acquisition of mobile technology impact on the physical ICT hardware structure **and** work practises within an organisation? (12 marks)

2 marks for definition of mobile systems and services + **2 marks** per 5 correct changes, such as:

Would need router and wireless of some sort.

Would need access to the internet – router/modem

Each person would need handheld device compatible with communication with server over wireless network.

Work Practises “perpetually connected” benefits associated with this 24/7 connectedness.

Provision of office not necessarily required – decentralising workers to home/road

Staff could be continually monitored.

(12 marks)

Clients potentially have access to service 24 hours a day, 7 days a week.

Decreased cost associated with providing this service – no need to open up an office.

Staff would have greater ability to make decisions with clients in front of them rather than reporting back to office – some decentralisation.

Can deliver educational packages over the wireless LAN so decrease training costs.

Could deliver test results of health checks over system

- (b) What are some of the advantages and disadvantages to employees associated with utilising the types of mobile technology that are mentioned in this article? (5 marks)

1 mark per correct response to a maximum of **5 marks**. These may include:

Greater flexibility in working hours.

Less demand to travel to office every day.

Ability to be accessible to clients/work without working in the confines of an office.

Flexibility in the delivery of corporate training may suit some workers over the attendance to specific course. Can attend virtual training/conferences anywhere, anytime – many courses delivered through Second Life.

Can collaborate with colleagues through MSN or other.

(5 marks)

Can obtain information instantly with web services

Perpetual connectedness may come with expectation to work 24/7.

Disconnection between work and home less obvious so may impact on downtime

If server in office breaks down – could cause data loss with increasing reliability on data transfer.

Staff monitoring – data mining of by employer of your particular work habits – impact on privacy of individual

- (c) What additional factors would influence an organisation to endorse or reject the use of mobile technology? (8 marks)

2 marks per correct response to a maximum of **8 marks**. These may include:

If there is a worker or manager with experience in utilising technology – the push factor.

Costs associated with introduction may be initially prohibitive if organisation small.

Expertise within organisation to be able to introduce/adopt and develop protocols.

(8 marks)

Reliance on technology may be daunting.

Sensitive information so fear of having organisational information hacked.

Clients may not be comfortable using technology.

If there is a demand from clients – the pull factor

Insurmountable legal issues surrounding policy development to protect copyright and privacy.

Question 2

(25 Marks)

Read the following excerpts and answer the question that follows.

Swap Songs with Strangers

Excerpt 1:

"Imagine that you have a mobile device that can store and play back music files, for example a mobile phone with an MP3 player. As you encounter various people, the devices you are carrying connect to each other wirelessly and media agents from the other nearby devices check the status of your media collection. Based on what you have been listening to in the past and which files you already own, new music might spontaneously and autonomously "jump" from another device to yours (and vice versa). Later, when you listen to your songs, your Push!Music player also plays some newly obtained tunes that you had not heard before."

Excerpt 2:

The creators of Push Music have "...recently received a lot of attention in media and blogs, which is great fun! However, there are a couple of misunderstandings of Push!Music and our aims with the project... Just to clarify a few things."

1. Push!Music is a research prototype, not a product. We have tested it in a small-scale user study but have at this point no plans to commercialize the technology.
2. The purpose is NOT to spread music or other content illegally. There are a number of systems that allow you to pay for songs you have downloaded via filesharing and even give compensation to the person you got it from, for instance Shawn Fanning's Snocap. There are also several ways you can subscribe to "all-you-can-eat" downloads, for instance the current incarnation of Fanning's previous venture Napster. When a payment model is in place, Push!Music will simply help people find more music, which can only be good for the artists.
3. When we do our current user tests, we are careful to stay strictly within the limits of Swedish law: we only use music that the users have paid for, and we limit copying to within a small circle of friends.
4. Many have brought up issues like viruses, spam and unwanted songs, advertising, the problem of correctly predicting what someone will like, etc. We are of course aware of these as potential problems with new ideas but that is no reason to not explore them! We are building and testing prototypes to find out more about both problems and unexpected opportunities.

Push!Music. (n.d.). Retrieved February, 2008, from Viktoria Institute website:

<http://www.viktoria.se/fal/projects/music/project.html>.

[Push!Music project <http://www.viktoria.se/fal/projects/music/index.html>].

- (a) In excerpt 2 part 4, the vendor makes reference to viruses and spam. Outline some simple countermeasures and techniques one could employ to ensure that this possibility of attack is reduced. (4 marks)

2 marks per correct countermeasure, to a maximum of 4 marks. These may include:

If possible, disable wireless/always on and power on only when you want to swap with a trusted party.

(4 marks)

Investigate the possibility of third party software to stop viruses/spam/firewall

Make new files download to a containment area or apart from the media

- (b) You found a virus scanner for your particular operating system on your MP3 player and so far it has not detected any malicious software. Due to convergence and utilities, these MP3 files are also downloaded to your desktop/laptop computer at home. On your recent download, your spyware scanner detected MP3.Trojan.Keylogger.Backdoor in one of the MP3 files.

- (i) What is a Trojan/Backdoor? (1 mark)

Allows remote access or compromise of computer

(1 mark)

- (ii) Provide two (2) reasons that explain why your MP3 virus scanner did not detect the Trojan/Backdoor. (2 marks)

Signatures not updated. Platform/OS/machine specific attack, i.e. aimed at desktop computer so inert on MP3

(2 marks)

- (c) Other than legal issues associated with the use of this ICT product, under Australian Law what ethical and moral issues could impact users in Australia, Sweden and elsewhere in the world? (18 marks)

Infringes on the artists copyright under Australian law as opposed Swedish law as it pushes music to another person's MP3 player without them actually paying for anything at the moment. Australian Copyright Act 1968, Digital Amendment Act of 2000. *4 marks if mention Act plus digital amendment.*

Data mining from MP3 players. Finding out each individual's personal taste so there may issues associated with Privacy Act of 1988. If it is not a commercial product – where is the money going to come from – selling individual buying details. *3 marks for identifying privacy act correctly.*

Prototype as opposed to commercialised product. This distinction does not matter under copyright law. Transferring music that another person has copyright to without payment is infringing on their copyright irrespective if it is a commercial product or not.

iPhones have been subject to virus, spams and unwanted advertising so why would these not also be vulnerable. Ethically company should afford some protection to the users of their product.

Filesharing and copyright issues. Australian copyright law still applies - refer Kazaar/Napster.

It is in Sweden so may have some problems getting hold of persons here. This software does not conform to Australian Copyright Law.

There is an issue of globalisation – made in Sweden but potentially used in Australia.

Morally – exploiting technology and preventing artists from earning money from their work.

End user expectations may be different in Sweden to those in Australia. Normalising behaviour that infringes on copyright. Companies should be held to account if they promote something that is actually illegal.

What if you do not want to be part of a conference? Is the software designed so that the user can control what information is seen and what is not? Mobile phones have the facility to control what another blue toother can see.

Cyberstalking – is this going to be likely given another user has access to your data and there is a level of data mining. So what guarantees are there that identity is protected?

Company should be issuing a code of conduct or applying a code of conduct to themselves when trying to penetrate the Australian market with their product.

People most likely to purchase this software – teenagers. Ethics and morals associated with trying to persuade teenagers that this is OK.

3 marks for each other issue raised covering ethics and morals. I.e., if they don't mention privacy act – maximum marks 15. If they don't mention copyright act with digital amendment – maximum marks 11.

END OF SECTION THREE

Question 1

In order to enhance **one** of the business organisations listed below, you are to design **one** of the following:

- (i) a web site or;
- (ii) a brochure or;
- (iii) an animation or;
- (iv) a computer game or;
- (v) a full complement of stationery logos required for a business.

Select one of the following business organisations:

- leisure/recreation;
- food/beverage;
- accommodation/travel;
- sport/health;
- education;
- retail.

The design can be informational, instructional/educational, promotional or for entertainment/edutainment purposes.

In developing your design you should apply a **technology process**, and justify all choices.

Part A

(10 marks)

- (i) Identify the purpose of the product being designed
- (ii) Identify and analyse the target audience and their requirements of the information solution you are designing

<ul style="list-style-type: none">• <i>Comprehensively outlines the target audience characteristics of gender, age, language levels, knowledge levels, culture, spending power, social status define and inform the design criteria</i>• <i>Links the purpose of the product to inclusivity issues</i>• <i>Comprehensively describes product purpose in terms of it being for informational, instructional/educational, promotional or for entertainment/edutainment, purposes.</i>	<i>(8–10 marks)</i>
<ul style="list-style-type: none">• <i>Identifies product purpose with some explanation of use</i>• <i>Makes reference to most audience characteristics in finer grain listed above with some explanation e.g. can make a linkage to design criteria i.e. preteen girls like pink and advise how this will affect design</i>	<i>(5–7marks)</i>
<ul style="list-style-type: none">• <i>Identifies basic characteristics of audience such as gender/age with limited further explanation</i>• <i>Limited identification of product purpose.</i>• <i>No attempt made, irrelevant or inappropriate response</i>	<i>(1–4marks)</i> <i>(0 marks)</i>

Part B**(50 marks)**

- (i) Sketch and annotate at least three (3) possible design solutions. You must clearly show the progressive changes, including the final design and explain the elements and principles of design to be used. Use appropriate technical language where necessary.

<ul style="list-style-type: none"> • <i>Annotations are comprehensively referenced back to major design criteria and target audience requirements</i> • <i>Justifications indicating interlinking and understanding of audience characteristics are concise and clear</i> • <i>Recommends changes in designs in relation to the target audience and begins to evaluate the impact of the product/solution on individuals, communities and/or the environment.</i> • <i>Final designs show clear development of product with decisions made obvious and logical.</i> • <i>Choice of design elements clearly target and engage the chosen target audience.</i> • <i>3 or more solutions have been designed and carefully compared and contrasted as to their suitability for the target audience</i> • <i>ICT product has been designed in creative and original ways, considering purpose, meaning, audience;</i> • <i>Uses specific criteria to evaluate the effectiveness of an information solution, such as readability, space, colour, shape and layout</i> • <i>Demonstrates awareness in design stages of the effect and requirements of software e.g. that data transfer is influenced by the nature and types of data.</i> • <i>Considers the constraints and limitations of storage, retrieval and transfer of data networks and the need for techniques (e.g. compression) and is able to comment on how this may impact on the design.</i> 	<p>(47–50 marks)</p>
<ul style="list-style-type: none"> • <i>Annotations are clearly referenced back to major design criteria and target audience requirements</i> • <i>3 designs clearly and comprehensively annotated</i> • <i>All designs are comprehensive, and include justification for alternatives and show reasoned reflection for modifications</i> • <i>Annotations of processes and products reflect strong use of technical language with detailed explanations</i> • <i>ICT product shows creativity and originality whilst considering purpose, meaning, audience</i> • <i>Comprehensively identifies link between purpose, and intended software use</i> • <i>Designs demonstrate an appropriate use of styles / structures / codes / conventions and aesthetic features appropriate to the beliefs and values of the target audience</i> 	<p>(43–46 marks)</p>

<ul style="list-style-type: none"> • <i>Identifies numerous elements and principles of design and links them to audience characteristics and requirements.</i> • <i>3 designs clearly and comprehensively annotated</i> • <i>Designs appropriately target the audience requirements, values and beliefs.</i> • <i>Identifies links between purpose, and intended software</i> • <i>Justifies alternative ideas comprehensively in designs and shows reasoned reflection for modifications in final design</i> 	<p><i>(39–42 marks)</i></p>
<ul style="list-style-type: none"> • <i>Identifies numerous elements and principles of design and links them to audience characteristics and requirements.</i> • <i>3 designs clearly annotated</i> • <i>Designs appropriately target the audience requirements.</i> • <i>Identifies reasonable links between purpose, and intended software</i> • <i>Justifies alternative ideas in all designs in reasonable detail and shows reasoned reflection for modifications in final design</i> 	<p><i>(37–40 marks)</i></p>
<ul style="list-style-type: none"> • <i>Final designs show developmental process in product and ideas</i> • <i>References against majority of design criteria</i> • <i>Alternative sketches considered, 2 design solutions presented and annotated in comprehensive detail or 3 in reasonable detail</i> • <i>Designs communicate concepts and ideas with a clear and concise awareness of target audience and purpose.</i> • <i>Basic link between purpose, and intended software</i> 	<p><i>(33–36 marks)</i></p>
<ul style="list-style-type: none"> • <i>Designs including the final design show that a process of development has been undertaken.</i> • <i>Appropriate use of design elements to engage the target audience</i> • <i>2 design solutions presented and annotated (in detail), (or 3 designs in some detail)</i> • <i>Designs communicate concepts and ideas with awareness of target audience and purpose.</i> • <i>Design annotations detail most of the connotations of the design elements, justifying suitability for the target audience, addressing key requirements and beginning to justify the alternatives</i> 	<p><i>(29–32 marks)</i></p>
<ul style="list-style-type: none"> • <i>2 designs with reasonable solutions presented and annotated containing some detail on design elements and their intended connotations.</i> • <i>Annotations contain some use of technical language.</i> • <i>Some awareness of target audience requirements and intended product purpose.</i> • <i>Some justification of alternate ideas.</i> 	<p><i>(25–28 marks)</i></p>

<ul style="list-style-type: none"> • <i>Identifies some design elements and links them basically to the target audience requirements.</i> • <i>2 design solutions presented and annotated with reasonable detail</i> • <i>Basic explanation of modification to designs</i> 	<i>(21–24 marks)</i>
<ul style="list-style-type: none"> • <i>2 or less design solutions presented and annotated</i> • <i>Basic identification of some design elements and links them simplistically to the target audience requirements. Beginning to explain some connotations of the design criteria.</i> • <i>Minimal explanation of modifications to designs.</i> 	<i>(17–20 marks)</i>
<ul style="list-style-type: none"> • <i>Identifies and annotates some design elements with basic explanation of connotations. Explanation lacks detail.</i> • <i>2 or less design solutions presented and annotated</i> • <i>Minimal evidence shown of how design elements engage a target audience</i> • <i>Little to no explanation of modifications made</i> 	<i>(13–16 marks)</i>
<ul style="list-style-type: none"> • <i>Identifies and annotates some design elements with little explanation</i> • <i>1 or less design solutions presented and simplistically annotated</i> 	<i>(9–12 marks)</i>
<ul style="list-style-type: none"> • <i>Minimal attempt made at designing a solution. Identifies minimal design elements with little to no explanation. Little to no link to target audience</i> • <i>1 or less design solutions presented</i> 	<i>(5–8 marks)</i>
<ul style="list-style-type: none"> • <i>Minimal attempt made at designing a solution. Identifies/lists minimal design elements with no explanation. No link to target audience</i> • <i>1 or less design solutions presented</i> 	<i>(1–4 marks)</i>
<ul style="list-style-type: none"> • <i>No attempt made, irrelevant or inappropriate response</i> 	<i>(0 marks)</i>

Part C

(40 marks)

Write a critical analysis of the **final** design, considering the following:

- (i) The effectiveness of the final design for the intended target audience. Consider the functionality of the final design, the aesthetics and any possible environmental issues.
- (ii) Identify where the product will be used. Discuss working and published file formats and identify the limitations/capabilities of the proposed software. Justify your selection of software based on the requirements for your final design.
- (iii) Compare your final product design to a known available product with a similar purpose.

<ul style="list-style-type: none">• <i>Clear criteria for design developed with reference to and justification against audience, publishing destination, and all software to be used.</i>• <i>Design elements and principles considered and mentioned with reference to functional/aesthetic, social and environmental criteria, navigation, usability, functionality, accuracy against other commercially available, similar products.</i>• <i>Is able to describe compare and contrast the constraints and limitations of the different formats of compression for the different file formats and state the effect on the final product.</i>• <i>Identify character of data and suitable file formats and justifies a file type against publication type, audience and capabilities and limitations of software considered (more than one).</i>• <i>Use of appropriate technical language (eg RGB, Greyscale, alpha, frames, fps, tweening, hierarchical, liner, buttons, hyperlinking, morphing, node/anchor editing, pixels, symmetry, balance, asymmetry, focal point, foreground, line, scale, perspective, contrast, harmony, gradation, value, texture, unity etc depending on product choice.</i>• <i>Refers to the nature of the data i.e.,</i><ul style="list-style-type: none">○ <i>vector, raster, bmp, stop motion, cel based, animation, video compression</i>○ <i>size both dimensional eg., pixels/resolution and space - size</i>• <i>References to published destination and how this will affect format to be transferred, file format, resolution, web safe colours, browser compatibility, print quality,</i>• <i>Make comparison to similar product along lines of criteria identified including functionality, aesthetics, navigation, inclusivity, usability, audience characteristics and possible environmental issues</i>• <i>Explains suitability of software (eg., raster editing software or video editing software) and why suitable for final product</i>• <i>Critically analyses that digital data has constraints and limitations when considering factors such as size, time, cost, resources, security, location, access and availability in relation to its intended audience and purpose</i>• <i>Identifies how each application is to be used and for what purpose</i>• <i>Refers to process of transferring between applications</i>• <i>Justifies by comparison referring to capabilities and limitations for why one design is chosen over the other</i>• <i>Comments of future proofing of design and potential future alterations/changes of use of design</i>	<p>(37–40 marks)</p>
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<ul style="list-style-type: none"> • <i>Presents a comprehensive, organised and sustained evaluation of designs, using ICT terminology widely</i> • <i>Clear criteria for design developed with reference to and justification against audience, publishing destination, and all software to be used.</i> • <i>Design elements and principles considered and mentioned with reference to functional/aesthetic, social and environmental criteria, navigation, usability, functionality, accuracy against other commercially available, similar products.</i> • <i>Is able to describe compare and contrast the constraints and limitations of the different formats of compression for the different file formats and state the effect on the final product.</i> • <i>References to published destination and how this will affect format to be transferred, file format, resolution, web safe colours, browser compatibility, print quality,</i> • <i>Make comparison to similar product along lines of criteria identified including functionality, aesthetics, navigation, inclusivity, usability, audience characteristics and possible environmental issues</i> • <i>Identifies how each application is to be used and for what purpose</i> • <i>Justifies by comparison referring to capabilities and limitations for why one design is chosen over the other</i> 	<p>(33– 36 marks)</p>
<ul style="list-style-type: none"> • <i>Identifies published destination and a file type/s that will be required</i> • <i>Make comparison to similar product referring to majority of design criteria including functionality, aesthetics, usability, navigation, audience characteristics, inclusivity.</i> • <i>Identifies suitability of types of software used.</i> • <i>Identifies which application/s (especially multiple software use) that will be used and why</i> • <i>Makes references to capabilities and limitations of software</i> • <i>Identifies products in formats and file types and comments on suitability for identified final destination of design</i> • <i>Makes clear reference to most design criteria</i> • <i>Able to refer to target audience and explain/critique design by referring to most characteristics of this audience and products final suitability and purpose/s</i> 	<p>(29–32 marks)</p>
<ul style="list-style-type: none"> • <i>Presents an organised and clear evaluation of designs, using ICT terminology</i> • <i>Links final design back to target audience characteristics and purpose</i> • <i>Identifies where product will be used and indicates file type suitable for this medium</i> • <i>Comments in some detail on suitability of software application used with reference to capabilities of software</i> • <i>Make a reasoned comparison to commercially available product with reference to most design criteria used</i> 	<p>(25–28 marks)</p>

<ul style="list-style-type: none"> • <i>Student shows attempt to link final design back to audience characteristics</i> • <i>Identifies where product will be used and indicates file type suitable for this medium</i> • <i>Comments on suitability of software application used with reference to capabilities of software</i> • <i>Makes basic comparison to commercially available product with some reference to design criteria</i> 	(21–24 marks)
<ul style="list-style-type: none"> • <i>Presents an evaluation using some ICT terminology correctly</i> • <i>Adequate explanation with some omissions of question requirements of the effectiveness of the final design for the intended target audience</i> • <i>Product use, working and published file formats,</i> • <i>Limitations/capabilities of the proposed software</i> • <i>Justification of software based on the requirements of the design.</i> • <i>Minimal comparison of own design to a known available product with a similar purpose.</i> • <i>Evidence of relevant knowledge however some areas may be weak or incomplete</i> 	(17–20 marks)
<ul style="list-style-type: none"> • <i>Limited comparison to other commercially available, similar products.</i> • <i>Simple explanation of software, file types and why chosen</i> • <i>Basic attempt to link final design back to audience characteristics.</i> • <i>Refers to 2 or 3 design criteria only</i> • <i>Minimal link to commercially available product.</i> 	(13–16 marks)
<ul style="list-style-type: none"> • <i>Presents an evaluation using limited ICT terminology.</i> • <i>Limited to no comparison to other commercially available, similar products.</i> • <i>Minimal explanation or listing of software and file types chosen</i> • <i>Basic attempt to link final design back to audience characteristics.</i> • <i>Refers to 1 or 2 design criteria only</i> • <i>Minimal to no link to commercially available product.</i> 	(9–12 marks)
<ul style="list-style-type: none"> • <i>Limited attempt made, basic listing of design elements and software to be used.</i> • <i>Limited application of design skills and knowledge demonstrated when analysing designs.</i> • <i>Minimal to no link to commercially available product.</i> 	(5–8 marks)
<ul style="list-style-type: none"> • <i>Minimal attempt made at addressing question requirements.</i> 	(1–4 marks)
<ul style="list-style-type: none"> • <i>No attempt made, irrelevant or inappropriate response</i> 	(0 marks)