



# Western Australian Certificate of Education Examination, 2011

## Question/Answer Booklet

### APPLIED INFORMATION TECHNOLOGY Stage 2

Please place your student identification label in this box

Student Number: In figures

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In words

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#### Time allowed for this paper

Reading time before commencing work: ten minutes  
Working time for paper: three hours

#### Materials required/recommended for this paper

##### *To be provided by the supervisor*

This Question/Answer Booklet  
Multiple-choice Answer Sheet

##### *To be provided by the candidate*

Standard items: pens, pencils, eraser, correction fluid/tape, ruler, highlighters

#### 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	Number of questions available	Number of questions to be answered	Suggested working time (minutes)	Marks available	Percentage of exam
Section One: Multiple-choice	20	20	20	20	10
Section Two: Short answer	6	6	35	30	15
Section Three: Extended answer	2	2	50	50	25
Section Four: Production	1	1	75	80	50
<b>Total</b>					100

## Instructions to candidates

1. The rules of the conduct of Curriculum Council examinations are detailed in the *Year 12 Information Handbook 2011*. Sitting this examination implies that you agree to abide by these rules.
2. Answer the questions according to the following instructions.

Section One: Answer all questions on the separate Multiple-choice Answer Sheet provided. For each question shade the box to indicate your answer. Use only a blue or black pen to shade the boxes. If you make a mistake, place a cross through that square, do not erase or use correction fluid, and shade your new answer. Marks will not be deducted for incorrect answers. No marks will be given if more than one answer is completed for any question.

Sections Two, Three and Four: Answer **all** questions. Write answers in this Question/Answer Booklet.

3. You must be careful to confine your responses to the specific questions asked and to follow any instructions that are specific to a particular question. It is recommended that you use colour pencils in any final designs.
4. Spare pages are included at the end of this booklet. They can be used for planning your responses and/or as additional space if required to continue an answer.
  - Planning: If you use the spare pages for planning, indicate this clearly at the top of the page.
  - Continuing an answer: If you need to use the space to continue an answer, indicate in the original answer space where the answer is continued, i.e. give the page number. Fill in the number of the question(s) that you are continuing to answer at the top of the page.

See next page

**Section One: Multiple-choice****10% (20 Marks)**

This section has **20** questions. Answer **all** questions.

Answer all questions on the separate Multiple-choice Answer Sheet provided. For each question shade the box to indicate your answer. Use only a blue or black pen to shade the boxes. If you make a mistake, place a cross through that square, do not erase or use correction fluid, and shade your new answer. Marks will not be deducted for incorrect answers. No marks will be given if more than one answer is completed for any question.

Suggested working time: 20 minutes.

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1. When a person's personal information is stolen and used by someone else, this is known as
  - (a) fraud.
  - (b) identity theft.
  - (c) piracy.
  - (d) plagiarism.
  
2. Which of the following statements is true in relation to copyright in Australia?
  - (a) Copyright applies automatically upon the creation of material.
  - (b) Copyright protects ideas, names and slogans.
  - (c) The owner of an intellectual property must register with the Australian Copyright Council.
  - (d) The copyright symbol © must be present to ensure copyright.
  
3. A device used to convert digital signals to analogue signals and vice versa is called a
  - (a) network interface card.
  - (b) switch.
  - (c) gateway.
  - (d) modem.
  
4. An emerging trend that uses multimedia to share and collaborate on the internet is referred to as
  - (a) podcasting.
  - (b) graphical user interface.
  - (c) Web 2 applications.
  - (d) operating systems.





5. The following image **best** demonstrates the design principle of

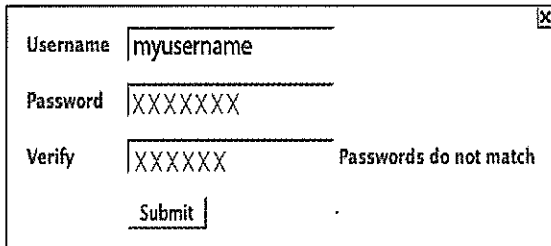


- (a) contrast.
  - (b) unity.
  - (c) space.
  - (d) repetition.
6. Which of the following is **not** a typical output device?
- (a) mobile phone
  - (b) scanner
  - (c) digital camera
  - (d) video camera
7. An individual's computer data and information can **best** be protected from internet threats by
- (a) using a properly configured firewall.
  - (b) having security settings set at a low or medium setting.
  - (c) not encrypting the wireless key.
  - (d) storing all passwords in a secure location.
8. Which of the following would be the **best** example of the design element 'form'?
- (a) shape
  - (b) curve
  - (c) sphere
  - (d) circle
9. The function of an operating system is to
- (a) word process documents.
  - (b) send e-mail/s.
  - (c) update software for users.
  - (d) start up and initialise a computer.
10. Which of the following is **not** an example of electronic commerce?
- (a) e-mail
  - (b) an online store
  - (c) an online auction site
  - (d) electronic retailing

11. The process by which internet hackers attempt to obtain your personal details by redirecting you to fake websites is called
- (a) bootlegging.
  - (b) phishing.
  - (c) pharming.
  - (d) spyware.
12. Malicious software can **best** be described as
- (a) software that malfunctions while being used.
  - (b) incorrect versions of software being used.
  - (c) software developed for the purpose of hacking.
  - (d) hardware that operates in a way that is disruptive to a user.
13. Electronic commerce has enabled customers to conduct bank transactions using
- (a) BPay.
  - (b) cheques.
  - (c) counter banking.
  - (d) automatic teller machines.
14. The Portable Document Format (PDF) file format is a popular format to use when saving a document because
- (a) it has the same formatting features and functions as Microsoft Office.
  - (b) you can open PDF files only in a web browser.
  - (c) it can be opened, viewed and printed by a plug-in that is freely available on the internet.
  - (d) you cannot edit a PDF document, so it is secure.
15. Which of the following would be the **best** file format to use for compressing an .avi video file while retaining the video quality of a DVD movie?
- (a) MPEG-2
  - (b) MPEG-4
  - (c) WMA
  - (d) JPEG
16. The process of combining different technologies is called digital
- (a) combination.
  - (b) convergence.
  - (c) telecommuting.
  - (d) devices.

17. What is the **best** way to dispose of computing equipment safely?

- (a) place in household bins
- (b) place in a landfill site
- (c) take to a recycling centre
- (d) export to other countries



A screenshot of a web form with three input fields: 'Username' containing 'myusername', 'Password' containing 'XXXXXXXX', and 'Verify' containing 'XXXXXXX'. To the right of the 'Verify' field, the text 'Passwords do not match' is displayed. A 'Submit' button is located below the 'Verify' field.

18. The image above **best** illustrates

- (a) extracting data from a user.
- (b) input validation rules.
- (c) filling out a form online.
- (d) typing in your username correctly.

19. When purchasing software, a user is given the source code. This software is most likely to be

- (a) proprietary.
- (b) freeware.
- (c) shareware.
- (d) open source.

20. Communication with speech-enabled software is called

- (a) voice recognition.
- (b) biometrics.
- (c) VoIP.
- (d) validation.

**End of Section One**

**See next page**

**Section Two: Short answer****15% (30 Marks)**

This section has **six (6)** questions. Answer **all** questions. Write your answers in the spaces provided.

Spare pages are included at the end of this booklet. They can be used for planning your responses and/or as additional space if required to continue an answer.

- **Planning:** If you use the spare pages for planning, indicate this clearly at the top of the page.
- **Continuing an answer:** If you need to use the space to continue an answer, indicate in the original answer space where the answer is continued, i.e. give the page number. Fill in the number of the question(s) that you are continuing to answer at the top of the page.

Suggested working time: 35 minutes.

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**Question 21****(4 marks)**

State **two** advantages and **two** disadvantages that mobile technologies have for employees in the workplace.

Advantage one: \_\_\_\_\_

\_\_\_\_\_

Advantage two: \_\_\_\_\_

\_\_\_\_\_

Disadvantage one: \_\_\_\_\_

\_\_\_\_\_

Disadvantage two: \_\_\_\_\_

\_\_\_\_\_

**Question 22**

**(4 marks)**

Document scanning is an efficient and cost-effective method of converting hard copy (paper) documents into a digital format. Describe **two** benefits of creating digital files from original paper documents.

Benefit one: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Benefit two: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Question 23**

**(3 marks)**

State **three** strategies that you would recommend to prevent a local area network from being compromised by hackers.

Strategy one: \_\_\_\_\_  
\_\_\_\_\_

Strategy two: \_\_\_\_\_  
\_\_\_\_\_

Strategy three: \_\_\_\_\_  
\_\_\_\_\_



Question 24

(7 marks)

Digital technologies such as ADSL2+ and wireless are not equally accessible to all individuals and communities. This is often referred to as the digital divide.

- (a) Give **two** examples of the negative impact on those affected by the digital divide. (2 marks)

One: \_\_\_\_\_  
\_\_\_\_\_

Two: \_\_\_\_\_  
\_\_\_\_\_

The globalisation of companies and the changing way in which business is done has led many businesses to outsource aspects of their work.

- (b) Define the term outsourcing and state **three** advantages of outsourcing for a business. (5 marks)

Definition: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Advantage one: \_\_\_\_\_  
\_\_\_\_\_

Advantage two: \_\_\_\_\_  
\_\_\_\_\_

Advantage three: \_\_\_\_\_  
\_\_\_\_\_

Question 25

(4 marks)

In today's competitive business world, it is very important that companies analyse clients' requirements. Provide **two** questions that you would ask a prospective client in an interview regarding their business requirements and needs.

Question one: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Question two: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Question 26

(8 marks)

- (a) The manager of a business intends to copy the operating system of his home computer to his business computer. Outline why this is illegal in terms of acquiring software. (2 marks)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- (b) In the table below, draw a line to connect each task to an application a manager would use to undertake that task. (6 marks)

Task	Application
• word processing	• preparing employee work schedules
• spreadsheet	• updating magazine catalogues
• database	• preparing a talk to a group of people
• email	• creating an advertisement
• presentation	• searching supplier websites
• internet browser	• sending messages using a mailing list

Section Three: Extended answer

25% (50 Marks)

There are **two (2)** questions in this section. Answer **both** questions.

Spare pages are included at the end of this booklet. They can be used for planning your responses and/or as additional space if required to continue an answer.

- Planning: If you use the spare pages for planning, indicate this clearly at the top of the page.
- Continuing an answer: If you need to use the space to continue an answer, indicate in the original answer space where the answer is continued, i.e. give the page number. Fill in the number of the question(s) that you are continuing to answer at the top of the page.

Suggested working time: 50 minutes.

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**Question 27**

**(25 marks)**

Social networking sites, such as Facebook, have changed the way in which we communicate with one another.

- (a) Describe **two** impacts social networking has had on modern society. (4 marks)

One: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Two: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Accessibility and inclusivity in design is an important aspect of ICT. Website designers must consider their widest possible target audience.

- (b) State **three** examples of inclusive features a designer could incorporate when creating a website. (3 marks)

One: \_\_\_\_\_

Two: \_\_\_\_\_

Three: \_\_\_\_\_

In 2007, a superfast broadband network infrastructure was proposed that would provide speeds of 100 Megabits per second to 93 per cent of Australians and 12 Megabits per second to the remaining 7 per cent. The network would supply fibre optical cabling and wireless technology directly to homes and businesses.

- (c) Explain **two** benefits the above network infrastructure would have for a business. (4 marks)

One: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Two: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

The growing opportunities for the misuse of ICT have led to an increase in the number of businesses implementing Codes of Conduct.

- (d) Describe **two** ethical issues relating to the use of ICT in a business environment. (4 marks)

One: \_\_\_\_\_

\_\_\_\_\_

Two: \_\_\_\_\_

\_\_\_\_\_

It has been estimated that electronic commerce generated over \$130 billion worldwide in 2009, with Australians spending over \$18 billion.

- (e) What is meant by electronic commerce? (1 mark)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- (f) The trend toward mobile computing means that an employee can work anywhere and anytime. List and describe **two** software applications that could help employees to collaborate and work on shared tasks. (4 marks)

One: \_\_\_\_\_

\_\_\_\_\_

Two: \_\_\_\_\_

\_\_\_\_\_

Read the article and answer part (g)

**LimeWire shut down by federal court**

LimeWire, one of the world's most popular peer-to-peer file-sharing websites, has been shut down after a four-year legal battle with the US music industry.

A federal court in New York issued a 'permanent injunction' against LimeWire late on Tuesday, ruling that the platform intentionally caused a 'massive scale of infringement' by permitting the sharing of thousands of copyrighted works by its 50 million monthly users.

The court also ruled that LimeWire should 'use all reasonable technological means to immediately cease and desist' copyright infringements still taking place through applications already downloaded.

Yesterday's court order comes after a four-year legal battle between LimeWire and the Recording Industry Association of America, the representative body for many of the world's largest record labels.

The site's popularity is reflected in a survey by NDP Group, which found that LimeWire was used by 58% of people who have downloaded music from a peer-to-peer network in the year from May 2009.

Source: [www.guardian.co.uk/technology/2010/oct/27/limewire-shut-down](http://www.guardian.co.uk/technology/2010/oct/27/limewire-shut-down)

- (g) Explain why the United States Federal Court decided to shut down LimeWire. (2 marks)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- (h) Give **three** examples of the impact of illegal file sharing in society. (3 marks)

One: \_\_\_\_\_

\_\_\_\_\_

Two: \_\_\_\_\_

\_\_\_\_\_

Three: \_\_\_\_\_

\_\_\_\_\_

**Question 28**

**(25 marks)**

- (a) What is the difference between secondary storage and cache? (2 marks)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

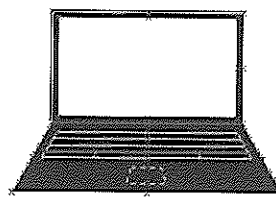
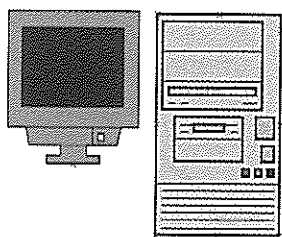
- (b) What is the function of a Central Processing Unit (CPU)? (2 marks)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





Desktop  
Quad Core i5-2400 CPU (3.1Ghz)  
Windows 7 Home Edition  
8GB DDR3 RAM  
2MB cache  
500GB SATA Hard Drive  
1GB GeForce GTX 460 Graphics Card

Laptop  
Quad Core i5-2410M CPU (2.3Ghz)  
Windows 7 Professional Edition  
4GB DDR2 RAM  
1MB cache  
500GB SATA Hard Drive  
On-board graphics

- (c) Based on the information above, which multimedia computer system would you recommend for an online gamer? Give **one** reason for your choice. (2 marks)

Recommendation: \_\_\_\_\_

\_\_\_\_\_

Reason: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- (d) A user is unsure whether to purchase a laptop or a desktop. State **two** advantages of a laptop computer. (2 marks)

One: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Two: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Section Four: Production**

**50% (80 Marks)**

There is **one** question in this section. You must answer **all** parts of the question.

Spare pages are included at the end of this booklet. They can be used for planning your responses and/or as additional space if required to continue an answer.

- **Planning:** If you use the spare pages for planning, indicate this clearly at the top of the page.
- **Continuing an answer:** If you need to use the space to continue an answer, indicate in the original answer space where the answer is continued, i.e. give the page number. Fill in the number of the part of the question that you are continuing to answer at the top of the page.

Suggested working time: 75 minutes.

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Question 29

(80 marks)

When designing a logo, it is important to keep it simple and eye-catching. A logo is what brands a company and gives it its corporate identity. A logo that is memorable is often the key to the successful marketing of a company.



The images above show various shapes and symbols. The shopping cart has become the worldwide standard web symbol for online shopping. Designers often use iconic symbols and shapes when creating logos.

- (a) (i) Why is it important that the designers of logos use easily recognisable symbols and shapes? (2 marks)

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Logo one



Logo two



Logo three

The simple use of line, shape, colour, type and space has created effective logos in the examples above. These are vector-based images saved in .AI or .EPS file formats.

- (ii) Why are vector-based images the best image formats to use when designing logos? (2 marks)

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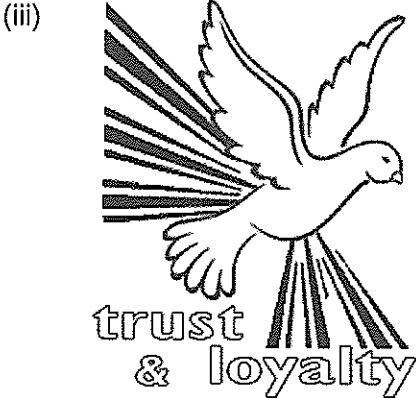
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Most logos consist of a single colour, typically a primary colour. However, some logos may have more than one or two colours.

For the following logos, identify the colour(s) that you would use to represent a company and give it a corporate identity. Explain your reasons for choosing the colour(s).



Logo one

(2 marks)

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Logo two

(2 marks)

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Mobile Communications Networking (MCN) is a new Perth company that manufactures and installs mobile/cellular phone towers. These towers have radio transmitters and receivers that facilitate communications with mobile phones and mobile communication devices that use radio frequencies.

MCN is requiring a professional, corporate logo that will be easily recognisable.

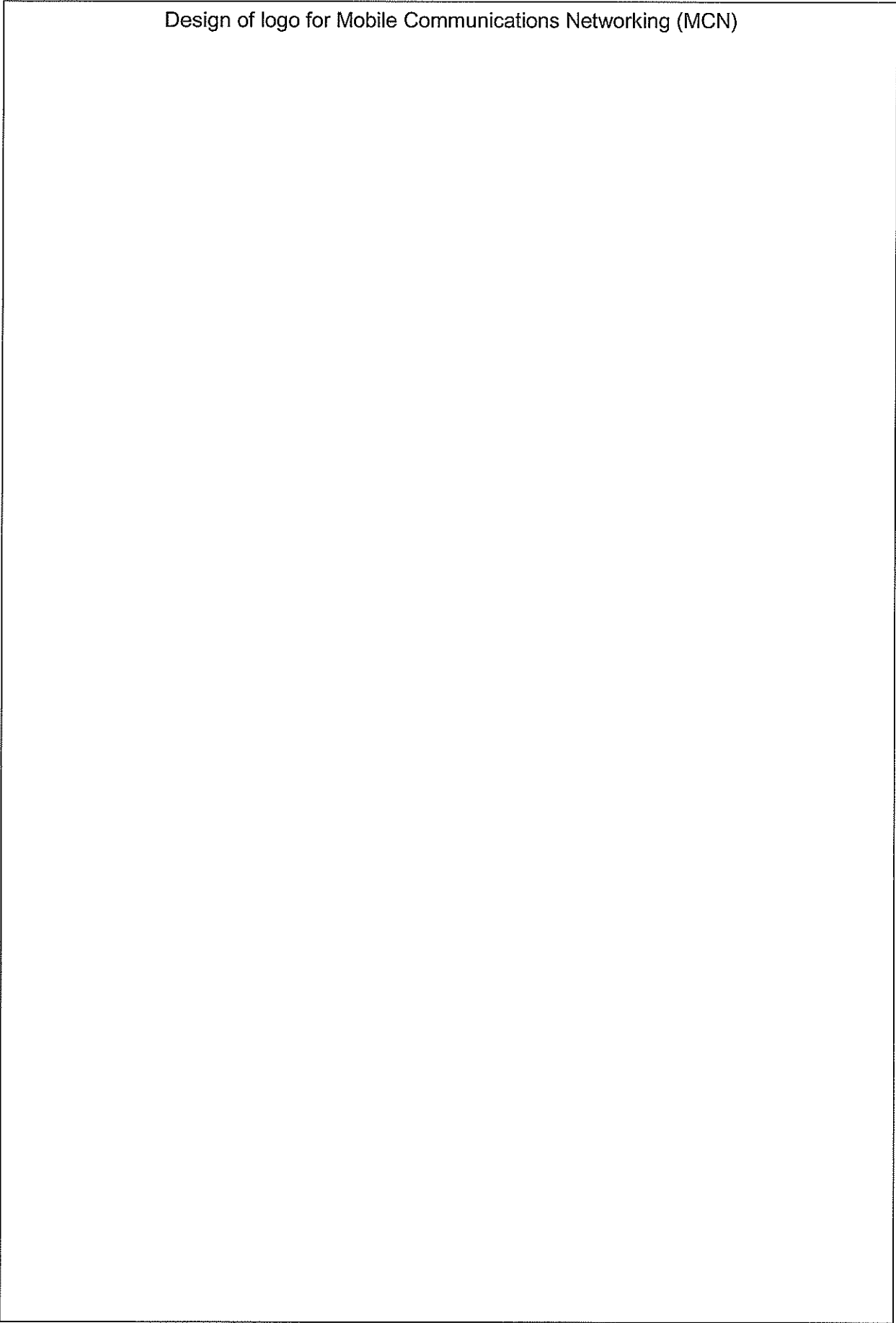
- (v) Using some of the following, design an easily recognisable and effective logo for MCN. (8 marks)
- space
  - texture
  - colour
  - line
  - alignment/position
  - shape/form
  - typography

Draft sketches will not be marked.

(Practice draft only - this will not be marked)

(Practice draft only - this will not be marked)

Note: Further working space is provided on page 37.



**See next page**







A poster is designed to attract attention and communicate information about an event or a product. The designer of a poster always keeps the target audience and purpose in mind.

The poster below advertises an environmentally friendly mobile phone.



(b) (i) Describe the target audience for this poster. (5 marks)

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The designer of this poster has used the principles of design to attract attention and communicate information about a mobile phone.

The designer would have considered using the following design principles.

- balance
- proportion
- dominance/contrast
- harmony
- unity/proximity
- repetition
- white space.

(ii) Identify and discuss **three** design principles you believe market and advertise this eco-friendly mobile phone successfully. (9 marks)

One: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Two: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Three: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- (iii) Identify **three** design features used on the poster that you would change to market this mobile phone to a different target audience. Explain why. (6 marks)

One: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Two: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Three: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

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**See next page**





# MMedia Design

[HOME](#) [about us](#) [contact us](#) [history](#) [web design](#) [business design](#) [Logos](#) [Poster design](#) [business cards](#) [iveb graphics](#) [letterheads](#)

## WELCOME

We are Perth's Premier Graphic Design Company

We design high quality, professional digital designs for print publications, website design, web graphics and business stationery for your business.

Our professional team of designers will meet with you to discuss your business requirements.

Don't put your company image in the hands of amateurs, MMedia Design are the professionals...we will take care of you.

*Blog your ideas!* [GO](#)

*Face it on facebook...* [GO](#)

*Who is Tweeting?* [GO](#)

*Youtube it!* [GO](#)

**Click here for tutorials**

- Photoshop Basic Course
- Photoshop Intermediate Course
- Photoshop Advanced Course
- Flash Animation Basic Course
- Flash Animation Intermediate Course
- Flash Animation Advanced Course

**GALLERY**

**TESTIMONIALS**

**FTP UPLOAD**

looking after The Environment



The target audience for the website on the previous page is businesses that require the services of a skilled design company to create digital designs such as company logos, business stationery, posters, websites and web graphics.

The purpose of MMedia Design's website is to inform, promote and market its digital design services. However, the management does not believe that the current design promotes the company in a professional manner.

- (iv) Identify **five** design faults that you would change and explain why. (10 marks)

One: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Two: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Three: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Four: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Five: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- (v) Use the following pages to redesign the web page in order to make it more suitable and aesthetically appealing to the target audience. (20 marks)

(Practice draft only - this will not be marked)

(Practice draft only - this will not be marked)

Note: Further working space is provided on pages 38 and 39.

Redesign of web page

See next page







Additional working space if required.

A large, empty rectangular box with a thin black border, occupying most of the page below the text. It is intended for students to provide additional working space if needed.

Additional working space if required.

A large, empty rectangular box with a thin black border, occupying most of the page below the text. It is intended for students to provide additional working space if needed.



Additional working space if required.

A large, empty rectangular box with a thin black border, occupying most of the page below the text. It is intended for students to provide additional working space if needed.

## ACKNOWLEDGEMENTS

### Section Three

**Question 27(g)** Adapted from: Halliday, J. (2010, October 27). *LimeWire shut down by federal court*. *Guardian*. Retrieved April, 2011, from [www.guardian.co.uk/technology/2010/oct/27/limewire-shut-down](http://www.guardian.co.uk/technology/2010/oct/27/limewire-shut-down).

### Section Four

#### Question 29

**Part (a)** Varney, D. & Osborne, J. (n.d.). (Images of: Chef's hat, No entry sign, paw prints, Shopping trolley, Palm tree, Hopper Tours, Transport WA, Key management, Trust and Loyalty & Awesome Paintball). Used by kind permission.

**Part (b)(i)** Healy, S. (n.d.). *Grow Phone* [poster]. Used by kind permission.

**Part (b)(iv)** Varney, D. (n.d.). Webpage design [screenshot]. Used by kind permission.

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