**Western Australian Certificate of Education
Examination, 2010**

**Question/Answer Booklet**

# APPLIED INFORMATION TECHNOLOGY

**Stage 2**

Please place your student identification label in this box

| Student Number: | In figures | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|

In words _____

_____

## 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 | 100 | 50 |
| | | | | **Total** | 100 |

## Instructions to candidates

1.  The rules of the conduct of Curriculum Council examinations are detailed in the *Year 12 Information Handbook 2010.* 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.

**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.

1. Which one of the following statements about the use of colour is true?

   (a) Red colours seem to recede into the distance.
   (b) Red colours should never be used with blue colours.
   (c) Complementary colours are used to create a monochromatic colour scheme.
   (d) Contrasting colour is used to draw attention to a particular part of an image.

2. Ergonomic requirements to ensure a safe and comfortable work environment are met by

   (a) designing the work environment and equipment to fit the user.
   (b) placing the keyboard in a position that allows the wrists to be straight.
   (c) ensuring screen distance allows for easy focusing on the screen.
   (d) assisting with seating to maintain correct height and incorrect posture.

3. Applying an inclusive approach to design means that the designers consider factors such as

   (a) disabled access, language barriers, financial barriers, use only complementary colours.
   (b) accessibility for the widest range of the population, including those with special requirements.
   (c) difficulty in content, font size, use only complementary colours.
   (d) colour blindness, height restrictions, and computer literacy levels.

4. Which one of the following should **not** be included in a company's ICT Code of Conduct?

   (a) appropriate use of equipment
   (b) ethical use of company information
   (c) appropriate use of company's email and the internet
   (d) publication of user names and passwords

5. A file with a .jpeg or .jpg file extension

   (a) is highly compressed, retains high quality and is lossless.
   (b) uses no compression, has large file sizes.
   (c) has a compression rate that is adjustable and trades off storage size for image quality.
   (d) is able to store a transparency that has a small file size and can store vector file formats.

**See next page**

6.      The purpose of a server in a local area network is to

     (a)      direct network traffic across the network.
     (b)      protect the network from hackers.
     (c)      connect different networks together.
     (d)      make available essential network resources to other computers on the network.

7.      White spaces are an important element of design as they

     (a)      allow for emphasis within the design.
     (b)      give a purpose for unused blank spaces.
     (c)      give a sense of elegance and style to a design.
     (d)      create a sense of balance.

8.      Which is the **best** way to calculate the total of the data entries in column B?

|   | A | B |
|---|---|---|
| 1 |   | Data |
| 2 |   | 3 |
| 3 |   | 1 |
| 4 |   | 2 |
| 5 |   | 5 |
| 6 | Total: | 11 |
| 7 |   |   |

     (a)      B2+B3+B4+B5
     (b)      sum(B2:B5)
     (c)      sum(B2 to B5)
     (d)      sum(B)

9.      Illegal file-sharing software applications used for distributing audio and video files enable

     (a)      users to pay for the downloading of music and video files online.
     (b)      the downloading of files using the BitTorrent protocol only.
     (c)      users to pay for the selective downloading of music files online.
     (d)      'Bootleg' recordings of music and video.

10.     Which one of the following statements is true?

     (a)      Convergence is a mobile phone application.
     (b)      Converged technology is only available on mobile devices.
     (c)      Convergence is when different digital devices merge together to form a new technology.
     (d)      Converged technology is when people can only have email and internet on their phone.

11. Which one of the following statements is true?

    (a) Shareware software usually employs some form of copy protection to stop illegal copying.
    (b) Shareware software requires registration in order to gain complete functionality of the software.
    (c) Shareware software is always inferior to proprietary software.
    (d) The copyright of the software has been waived by the author, thus allowing others to modify the software without restriction.

12. Which one of the following is the **best** example of how digital media is replacing print media?

    (a) the internet
    (b) a newsletter
    (c) books
    (d) video games

13. Which one of the following is true about operating system software?

    (a) It performs maintenance or general-purpose tasks only.
    (b) It is computer software designed to help the user to perform single tasks.
    (c) It is computer software designed to operate the computer hardware.
    (d) It is computer software that provides an interface between the hardware and other software.

14. The Australian Copyright Act (1968) allows for which one of the following exceptions?

    (a) The use of copyright material for the purpose of research or study will not breach copyright, provided the use is 'fair'.
    (b) Non-profit and government organisations are exempt from copyright law.
    (c) TV broadcasters and radio broadcasters are exempt from copyright law.
    (d) People are allowed to use copyrighted material, provided that it is for their own personal use.

15. Using quotation marks in a boolean search on 'oatmeal cake and recipes' would

    (a) exclude all words related to the phrase 'oatmeal cake recipes'.
    (b) return all words related to the phrase 'oatmeal cake and recipes'.
    (c) include results for 'oatmeal cake' and results for 'recipes'.
    (d) would ignore common words such as 'and'.

16. A digital designer would use the design element of texture because it

    (a) creates depth by suggesting perspective.
    (b) uses areas of dark and light to make the design appear lifelike.
    (c) uses surface quality to create a three-dimensional appearance to the design.
    (d) creates a sense of harmony through repetition.

17.     Which of the following is responsible for executing instructions inside a computer?

     (a)     the Central Processing Unit
     (b)     Random Access Memory
     (c)     the Motherboard
     (d)     Cache


18.     The purpose of a firewall, when used in a local area network, is to

     (a)     act as gateway between the local area network and the Internet.
     (b)     protect the network from computer viruses.
     (c)     log network traffic in order to monitor the websites visited by users.
     (d)     filter traffic across a network according to a set of pre-defined rules.


19.     Which one of the following hardware devices do you typically associate with the term 'dots per inch'?

     (a)     a digital camera
     (b)     a printer
     (c)     a speaker
     (d)     a video camera


20.     The process of compression

     (a)     is intended to make files smaller in size.
     (b)     can always be reversed and the original data restored perfectly.
     (c)     protects the data from being understood by unauthorised users.
     (d)     does not slow the rate of access to the original data.


**End of Section One**

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

There are **six (6)** questions in this section. Answer **all** 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: 35 minutes.

**Question 21**                                                 **(5 marks)**

The following logo was created for a travel agency.

The travel agency is very concerned that someone might copy the logo design without its permission and alter it in some way. The travel agency believes it may have to register its design.

(a)      Is the travel agency required to register the logo?                  (1 mark)

(b)      Tourism WA wants to put the travel agency's logo on its website. What should Tourism WA do in order to gain copyright clearance?                (1 mark)

(c)      What term is used to describe the practice of copying text from another source without citation?                (1 mark)

**See next page**

(d) The Australian Copyright Act (1968) provides legal protection for a range of works. List **two** types of works, other than computer software, that are protected by copyright.

(2 marks)

One: _____

_____

Two: _____

_____

**Question 22** **(4 marks)**

(a) List **two** ways in which manufacturers of ICT can encourage the safe disposal of their hardware. (2 marks)

One: _____

_____

Two: _____

_____

(b) What are **two** ways in which web designers can reduce the printing of documents or information from a website? List two ways other than electronic catalogues. (2 marks)

One: _____

_____

Two: _____

_____

# Food For Life

Search >

In: Recipes

Search for:

Search tips

Hors d'oeuvres | Entree's | Mains | Deserts | Pastries | Vegetarian | Drinks

RECIPE OF THE WEEK

## Pork Dishes

WHAT'S COOKING WITH CHICKEN?

Fish Recipes

WHAT'S COOKING WITH FISH?

Chat live with our Guest Chef!

### Learn about cooking with fresh herbs

Cooking with fresh herbs really enhance the flavors of food. There are hundreds of varieties of fresh herbs available . I will chat with you about the many populat herbs used today such as thyme, dill and tarragon (just to name several).I am happy...read more

### Learn about cooking with spices

I often find that many home cooks are frightened by the huge numbers of spices that are available in our supermarkets. This confusion will often lead to cooks just sticking to what they know works and not experimenting...read more.

## WELCOME

Hi and welcome to Recipes for Life. We have an extensive collection of recipes collected over the years and submitted by our members, their families and their friends. We have rummaged through old cookbooks (tried and tested) and old newspapers and publications to entice you with a wonderful range of recipes for the novice cook to the most accomplished Chef.

There's also a few other helpful links that might come in handy. Check out the link for food remedies which can help to alleviate symptoms associated with common colds, rashes, bee stings and many others. Review our hundreds of recipes by following the links and subscribe to our newsletter for the latest recipe updates and advice

*Bon Appétit*

**Subscribe to e-newsletter**

Name:

Email:

Submit

topics

food for thought

educators

eating for special needs

food science

food remedies

text to voice

site map

**Question 23** **(4 marks)**

Based on the screenshot of the website 'Food for Life' provided on the previous page, identify **four** inclusive design features that promote accessibility and inclusivity. Circle each feature on the screenshot and outline briefly how each feature promotes accessibility and inclusivity.

One: _____

_____

_____

Two: _____

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Three: _____

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Four: _____

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**Question 24** **(7 marks)**

(a) Anne owns a personal computer that she uses for a variety of home office tasks. List **five** operations that Anne should perform at regular intervals to ensure the reliable use of her computer. (5 marks)

One: _____

_____

Two: _____

_____

Three: _____

_____

Four: _____

_____

Five: _____

_____

(b) The trend toward 'mobile working' has impacted the work expectations and lifestyles of the worker. Identify **two** advantages of working away from the office. (2 marks)

Advantage One: _____

_____

_____

Advantage Two: _____

_____

_____

**See next page**

**Question 25** **(5 marks)**

Tom is a relatively inexperienced computer user who has purchased a computer to browse the Internet, create word processing documents and store digital photos.

(a) Tom struggles constantly to find important documents stored on his computer. List **two** ways in which Tom can organise his computer so that he can search for 'lost' files.

(2 marks)

One: _____

_____

Two: _____

_____

(b) Tom thinks that his computer is infected by a virus. List **three** problems that he may experience if his computer is infected. (3 marks)

One: _____

_____

_____

Two: _____

_____

_____

Three: _____

_____

_____

**Question 26**                                                              **(5 marks)**

The use of PDAs (Personal Digital Assistants) is becoming very common.  Manufacturers are often faced with selecting an appropriate means of transferring data between a personal computer and the PDA.

Give **one** major reason why a PDA manufacturer would select each of the following to transfer information from a PDA to a computer.

Infra-red:

_____

_____


Bluetooth:

_____

_____


Wireless networking:

_____

_____


Docking stations:

_____

_____


Flash memory card:

_____

_____


**End of Section Two**

**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.

**Question 27** **(25 marks)**

There is a need to promote reliable distance education services and programs to rural and remote students and their families living in Australia. Distance education students can access teachers, and online courses, via the internet. It has often been said that there is a 'digital divide' for those Australians living in remote and rural areas who do not have access to technology such as distance education services.

(a) Describe the term 'digital divide' in relation to the above statement. (2 marks)

In a world where information is the new currency we must be able to communicate easily with each other, and with the rest of the world. Broadband technologies will be the 'road and railway' of the 21st century.

(b) Describe **four** challenges faced by the Australian Government in providing ICT access and distance education programs to communities living in remote and rural Australia.
(4 marks)

One:

Two:

Three: _____

_____

_____

Four: _____

_____

_____


(c)     There has been a big increase in the number of people who are watching video
        transmissions over the internet.  Describe **four** telecommunications technologies which
        have made this trend possible.                                        (4 marks)

One: _____

_____

_____

Two: _____

_____

_____

Three: _____

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_____

Four: _____

_____

_____

**See next page**

(d)      Using an example, give a definition of a Podcast and state **two** advantages of communicating by a Podcast.            (4 marks)

Definition using an example:

_____

_____

_____

Advantage one: _____

_____

_____

Advantage two: _____

_____

_____

With increased exposure to internet video, there has also been an increased dependency of society upon electronic and visual communication.

(e)      Describe **two** positive and **two** negative impacts that the increase in exposure to internet video has had on society.            (4 marks)

Two positive impacts:

_____

_____

_____

_____

_____

Two negative impacts:

_____

_____

_____

_____

_____

**See next page**

By way of improved technology that is portable, such as mobile phones, organisations can broadcast advertisements and 'socially market' their products and services directly to your phone via SMS or MMS or email.

Many people are concerned about this form of unsolicited marketing as they feel their content, such as personal information, stored on their device might be subject to phishing.

(f)     Describe how a 'phishing' email attempts to gain personal information.     (2 marks)

_____

_____

_____

_____

(g)     Pharming is another way hackers attempt to manipulate users on the Internet. Describe the term 'pharming'.     (2 marks)

_____

_____

_____

_____

(h)     The Privacy Act (Australian) contains rules on how Australian government agencies and private sector organisations are allowed to collect and handle your information.

As a manager you have been given the task of telling your employees about the rules regarding the use of personal and private information collected from clients.

State **three** information privacy rules that your employees would have to follow. (3 marks)

Rule one: _____

_____

_____

Rule two: _____

_____

_____

Rule three: _____

_____

_____

**Question 28**                                           **(25 marks)**

Duncraig Print Solutions is a print media company that publishes a daily sporting newspaper. The company employs a reasonably large number of people in different roles, such as journalists, photographers, graphic designers and IT technicians.

(a)     Describe **three** unique hardware requirements for the computers used by the company's graphic designers.                                     (6 marks)

Requirement one: _____

_____

_____

_____

_____

Requirement two: _____

_____

_____

_____

_____

Requirement three: _____

_____

_____

_____

_____

(b)     Define the term 'graphics software' and give **two different** examples of computer
        graphics software that the graphic designers at Duncraig Print Solutions could use.
        (3 marks)

        Definition:

        _____

        _____

        _____

        Example one:

        _____

        _____

        _____

        Example two:

        _____

        _____

        _____


(c)     Define the term 'personal information management' (PIM) software and give **two**
        examples of PIM software that the journalists at Duncraig Print Solutions could use.
        (3 marks)

        Definition:

        _____

        _____

        _____

        Example one:

        _____

        _____

        _____

        Example two:

        _____

        _____

        _____

**See next page**

(d) Employees of Duncraig Print Solutions need to share files and peripherals. Describe the **best** way of connecting the computers and give **two** advantages of connecting them in this way. (3 marks)

Best way of connecting the computers: _____

_____

_____

Advantage 1: _____

_____

_____

Advantage 2: _____

_____

_____

(e) Provide **three** factors that should be considered in deciding which operating system should be installed on Duncraig Print Solutions' computers. (3 marks)

Factor one: _____

_____

_____

_____

Factor two: _____

_____

_____

_____

Factor three: _____

_____

_____

_____

(f)     Provide **one** advantage and **one** disadvantage of using different operating systems on the computers owned by Duncraig Print Solutions.      (2 marks)

Advantage: _____

_____

_____

_____

_____

Disadvantage: _____

_____

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(g)     Describe **three** ways in which Duncraig Print Solutions can ensure that access to the internet is controlled in a way that provides access to those who need it, and deals with the concerns of misuse and abuse.      (3 marks)

One: _____

_____

Two: _____

_____

Three: _____

_____

(h)     Some of the employees of Duncraig Print Solutions are inexperienced computer users. List **two** ways in which the company can assist them using online methods.      (2 marks)

One: _____

_____

Two: _____

_____

**End of Section Three**

**See next page**

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**Section Four:  Production**                                          50% (100 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.

**Design Brief**

Youngwest is launching a new concept café and teen leisure centre called 'The Hangout'.

The style of the 'The Hangout' will need to appeal to teenagers who wish to socialise in a comfortable, vibrant environment.

'The Hangout' therefore needs to convey the following characteristics to its audience:

- cosy, safe and secure environment to relax with friends
- healthy yet economical food
- alcohol and drug free environment
- active environment with activities such as games, roller skating, circus and trapeze acrobatics and tenpin bowling.

Youngwest's management has decided it would like the graphic design team to creatively promote 'The Hangout'.

As a member of the graphic design team, you are responsible for designing

1.      a company logo to promote 'The Hangout'

        and

2.      a promotional medium that is **either** a web page **or** a poster to promote 'The Hangout'.

        Circle **one** of the following to indicate which promotional medium you will be designing:

                        **Web page**                              **Poster**

An overview of the different parts of this section is as follows:

Part A:  Pre-design ideas                                                    10 marks
Part B:  Design and analysis of a logo                                        35 marks
Part C:  Design and analysis of a web page **or** poster                       40 marks
Part D:  Transfer of digital data                                             15 marks

**See next page**

**Question 29** **(100 marks)**

**Part A:  Pre-design ideas**

(a)    (i)    Describe the characteristics of the specific group of teenagers you will target for 'The Hangout'. (4 marks)

_____

_____

_____

_____

_____

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_____

       (ii)    Explain the design elements you will use in the design of your logo to appeal to the target audience defined in (a) (i). (3 marks)

_____

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(iii)    Explain the design principles you will use in the design of your promotional
medium to appeal to the target audience defined in (a) (i).                    (3 marks)

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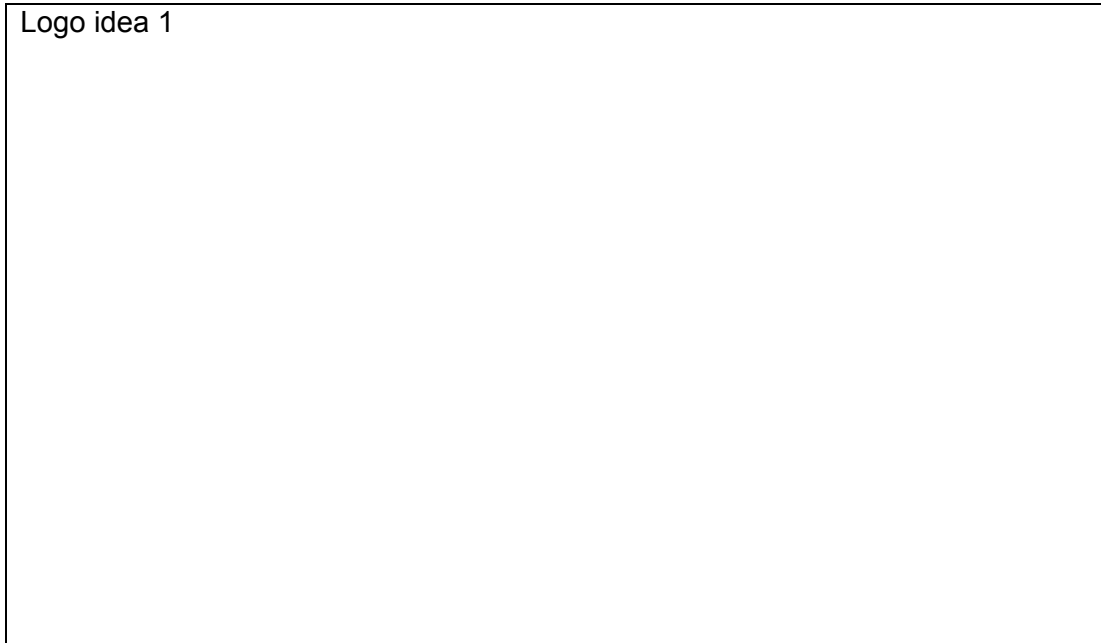
**Part B:  Design and analysis of a logo**

(b)　　In the space provided

　　　(i)　　Sketch **three** distinctly different ideas to be considered for the logo design.

(10 marks)

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Logo idea 1




















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Logo idea 2
















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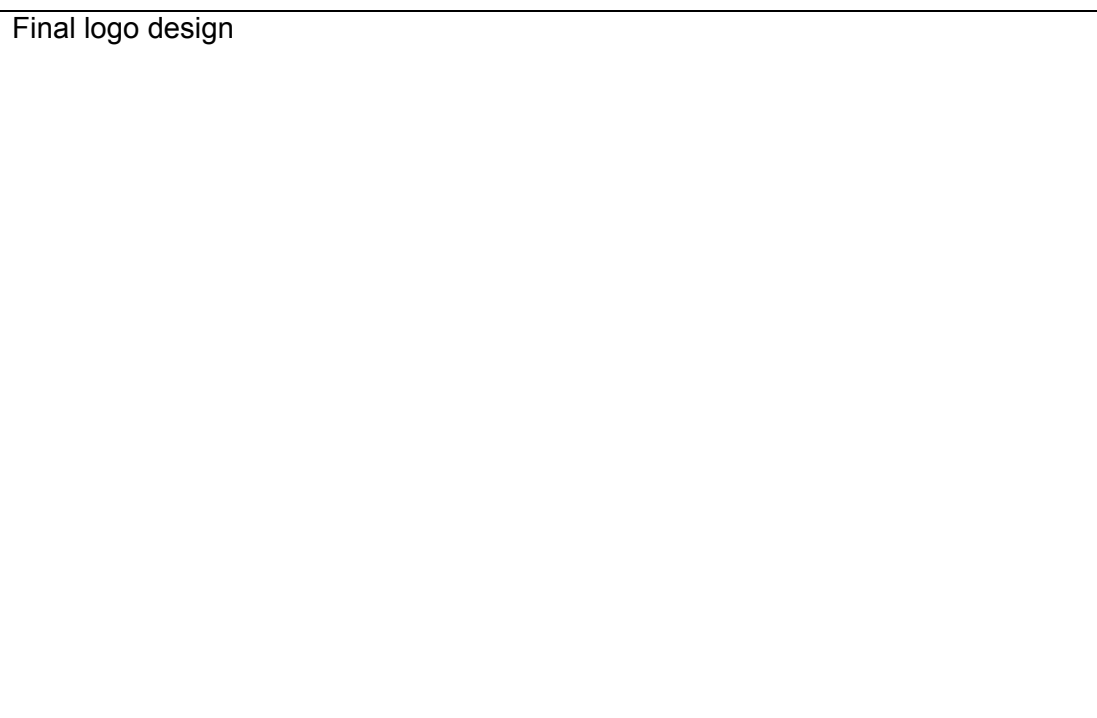
Logo idea 3

(ii)     Sketch your **final** logo design.  Ensure that you include your design elements
         explained in (a) (ii).                                              (20 marks)

Final logo design

(ii)     Explain how **five** design elements that you have used in your final logo design provide a
         unique identity for 'The Hangout'.                                            (5 marks)

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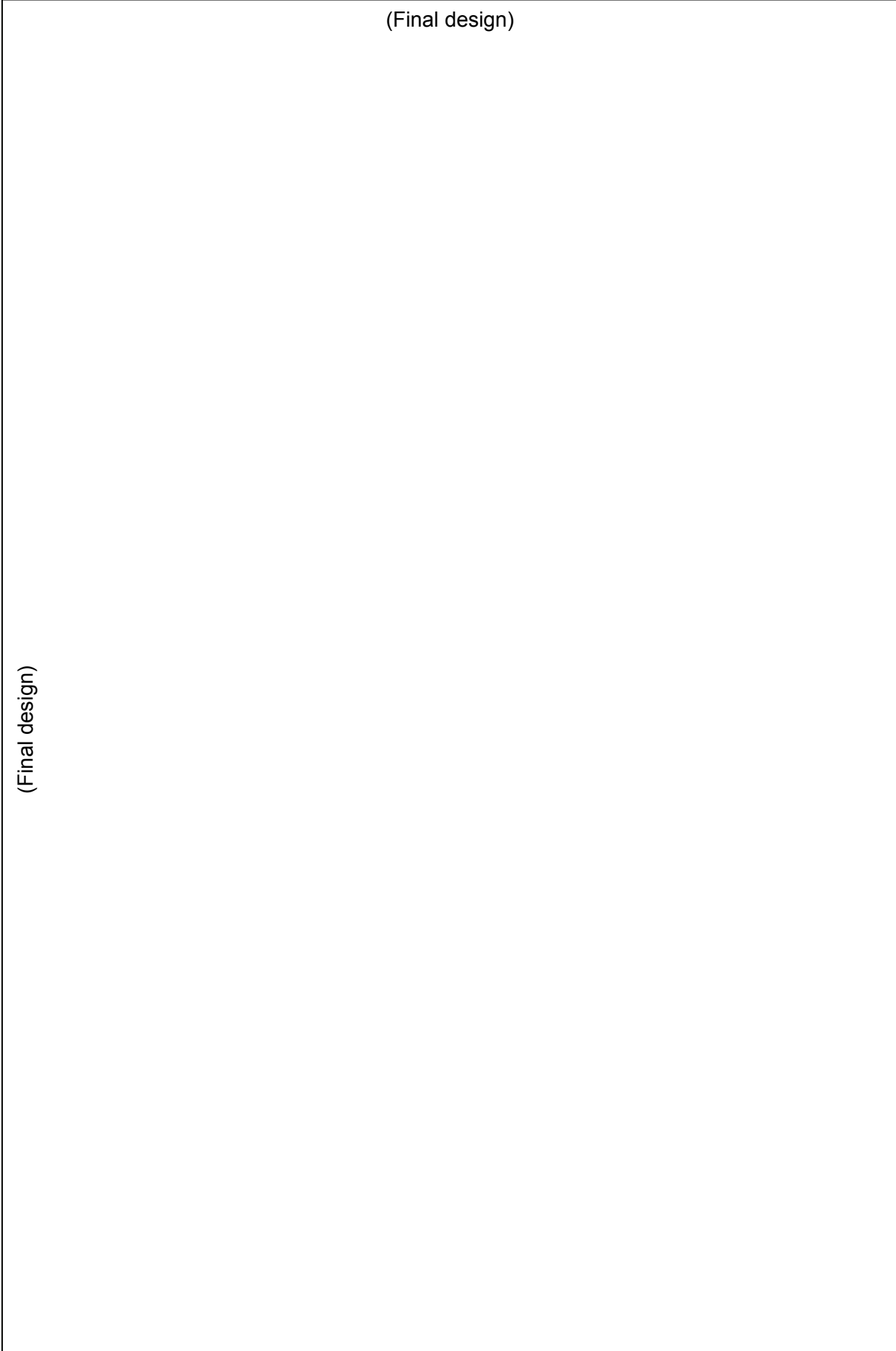
**Part C:  Design and analysis of a web page or poster**

(c)      (i)      In the space provided, draw **one** sketch of your web page **or** poster.  Consider
                the following:

                 •       Ensure that the content and design features of the final design promote
                        'The Hangout' and its benefits.
                 •       Ensure your design reflects the principles and elements of design you
                        explained in Part A.                                   (20 marks)

---

(Practice draft only - this will not be marked)

(Practice draft only) – this will not be marked

---

(Final design)

(Final design)

(c)  (ii)  Choose **three** of the design principles you have used in the design of your web page or poster and explain why you have used them in your design.  (15 marks)

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(c)    (iii)    Discuss your choice of typography, explaining your choice in terms of its appeal to the target audience.     (5 marks)

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**See next page**

**Part D: Transfer of digital data**

(d)    Youngwest has decided to use your webpage or poster.  Before it does, it would like you to explain the following:

(i)    When working with your development software, what are the native/proprietary file formats that you would use to develop your website or poster?  Justify your choices.    (5 marks)

_____

_____

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(ii)    What would be the best file format to use when exporting the logo out of a common graphics software program?  Justify your choice.    (5 marks)

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_____

(iii)   You have been asked to email your logo design to a printing company so that it can be used for printing on letterheads and business cards.  The printing company has suggested you create your logo design as a vector image file type and export it as a pdf file format type.  Provide **five** reasons why the printer would request a vector graphic image type and a pdf file format type.

(5 marks)

Reason one:  _____

_____

_____

Reason two:  _____

_____

_____

Reason three:  _____

_____

_____

Reason four:  _____

_____

_____

Reason five:  _____

_____

_____

**End of questions**

Spare answer page: _____

Spare answer page:

Spare answer page: _____

Spare answer page: _____

Spare answer page:

Spare answer page:

# ACKNOWLEDGEMENTS