Government of **Western Australia**
Curriculum Council

WACE
Western Australian Certificate of Education

Western Australian Certificate of Education Examination, 2011

Question/Answer Booklet

APPLIED INFORMATION TECHNOLOGY

Stage 3

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.

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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	65	50
				Total	100

Instructions to candidates

1. The rules for the conduct of Western Australian external 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.

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. A network cable used to connect a personal computer to a wall socket is an example of what transmission medium?

   (a) power cable
   (b) twisted pair
   (c) wireless
   (d) fibre optic

2. If a person downloads an image from a website and posts it without permission on their Facebook page, they are guilty of

   (a) violating privacy laws.
   (b) breaking copyright laws.
   (c) distributing spam.
   (d) nothing illegal.

3. The use of a biometric device, such as a hand or finger scanner, is done to

   (a) impress customers.
   (b) save money.
   (c) improve security.
   (d) take up desk space.

4. Which of these types of memory/storage is currently the fastest?

   (a) flash drive
   (b) DVD
   (c) RAM
   (d) hard drive

5. A file created with a .TIFF extension as its default is what type of file?

   (a) text file
   (b) image file
   (c) executable file
   (d) directory or folder

See next page

6. Benchmarking a piece of software refers to

(a) investigating whether it will run on a new platform.
(b) determining its performance.
(c) deciding whether it is worth buying.
(d) finding whether it will run in its own window.

7. Which of the following bandwidth speeds is fastest?

(a) 512 Kbit/s
(b) 1 Mbit/s
(c) 16 Kbit/s
(d) 8 Mbit/s

8. Indexing database files on a computer system facilitates

(a) compact representation.
(b) secure sharing.
(c) efficient searching.
(d) organising the database.

9. Fair dealing rules offer exceptions to laws on

(a) copyright.
(b) intellectual property.
(c) moral rights.
(d) occupational health.

10. Storyboarding would be used in product development to

(a) illustrate the relationships between programs.
(b) understand the memory usage of a program.
(c) portray how users interact with a program.
(d) depict the control flow in a program.

11. Which of the following is an example of a system maintenance tool?

(a) firewall
(b) disk defragmentation
(c) function key
(d) network protocol

12. A possible way to avoid online censorship is to use a

(a) more powerful computer.
(b) password-cracking program.
(c) proxy server.
(d) torrent server.

See next page

13. Which of the following should **not** be a consideration when comparing and analysing similar software?

(a) user interface
(b) functions
(c) configuration
(d) packaging

14. A major negative feature of a star network is

(a) single point of failure.
(b) cost of installation.
(c) complexity of design.
(d) slow transmission speed.

15. In a global environment, what could a company put on its website to assist users of the site?

(a) complaints page
(b) currency converter
(c) language converter
(d) navigation bar

16. Which of the following devices is purely an input device?

(a) speakers
(b) hard drive
(c) wireless mouse
(d) mobile phone

17. What cost-saving method of communication can companies use when they want to speak face-to-face with their employees overseas?

(a) video conferencing
(b) flying employees to one location
(c) sending group e-mail
(d) using Facebook

18. Backing up files incrementally means storing

(a) them one at a time.
(b) them on separate drives.
(c) only the files changed since the last backup.
(d) only the files bigger than a certain size.

See next page

19. Which of the following is an encryption method?

(a) digital signatures
(b) compression of file keys
(c) restrictions on passwords
(d) alias keys

20. Intellectual property refers to

(a) guarantees.
(b) patents.
(c) warranties.
(d) registrations.

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.

Question 21 **(6 marks)**

(a) List **two** video file types. (2 marks)

One: _____

_____

Two: _____

_____

(b) List **two** file types that are best suited for graphic files to be uploaded to a website. (2 marks)

One: _____

_____

Two: _____

_____

(c) List **two** file types that are the result of compressing a wave audio file. (2 marks)

One: _____

_____

Two: _____

_____

Question 22 **(4 marks)**

Identify **two** protocols and **two** network devices that could be used in establishing a small-scale network.

Protocol one: _____

Protocol two: _____

Network one: _____

Network two: _____

Question 23 **(3 marks)**

Provide **three** advantages of using templates in developing websites.

One: _____

_____

Two: _____

_____

Three: _____

_____

Question 24 **(6 marks)**

(a) Provide **three** precautions you would take when purchasing a product online. (3 marks)

One: _____

_____

Two: _____

_____

Three: _____

_____

(b) List **three** methods that can be used to protect your identity when using the internet. (3 marks)

One: _____

_____

Two: _____

_____

Three: _____

_____

Question 25 **(7 marks)**

(a) How would a company ensure that the information communication technology services supplied to it by an internet service provider will meet the requirements of its business? Why is this important? (2 marks)

_____

_____

_____

_____

_____

_____

(b) List **two** ways in which industry can store large amounts of data for projecting trends and sales. (2 marks)

One: _____

_____

Two: _____

_____

_____

(c) List **three** ways of minimising the risk of data loss from your storage area network due to physical threats. (3 marks)

One: _____

_____

Two: _____

_____

Three: _____

_____

Question 26 **(4 marks)**

Explain the relationship between elements of design and creative design principles. Give an example of each to illustrate your explanation.

_____

_____

_____

_____

_____

_____

_____

_____

End of Section Two

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See next page

Section Three: Extended answer **25% (50 Marks)**

This section contains **two (2)** questions. You must answer **both** 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.

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- 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 **(20 marks)**

HoldOn is a Perth-based magazine focusing on lifestyle, travel and events in Western Australia. You have been employed as a consultant by the company that owns HoldOn to assist in the upgrading of its hardware and software. The company wishes to ensure that it has the right tools to update its website and to process and manipulate data.

Hardware, with an effective life of three years, is being sought for multimedia and general workstations. The multimedia workstation requires industry standard desktop publishing, graphics, web and video editing applications. The general workstation requires office-type applications, email and basic photo manipulation applications. In addition, the general workstation is to be a portable technology solution.

Complete the table on the opposite page by recommending the type and size of hardware suitable for each of the work stations. Explain your reasons for selecting the hardware.

See next page

Component	Type/size	Reason
CPU	Multimedia workstation _____	_____ _____
	General workstation _____	_____ _____
Primary memory	Multimedia workstation _____	_____ _____
	General workstation _____	_____ _____
Monitor/ display	Multimedia workstation _____	_____ _____
	General workstation _____	_____ _____
Graphics card	Multimedia workstation _____	_____ _____
	General workstation _____	_____ _____
Secondary memory	Multimedia workstation _____	_____ _____
	General workstation _____	_____ _____

See next page

Question 28 **(30 marks)**

Boar Richards Ltd is a multinational company with mine sites all over the world and its corporate office is in Perth's central business district. Its information communication technology services are managed by various external providers in Australia and overseas.

(a) Explain, using examples, the difference between globalisation and outsourcing. (4 marks)

(b) Identify and justify **four** reasons why a large company such as Boar Richards Ltd would choose to outsource its information communication technology services. (8 marks)

(c) The induction of new staff at Boar Richards Ltd includes training regarding the ethics of employer and employee relationships.

Describe **four** procedures that would be part of a presentation to new employees regarding the ethical use of information communication technology in the workplace. You should provide **four** examples, **one** for each procedure. (8 marks)

See next page

(d) The company's information communication technology policy governing the use of email limits the size of employee electronic mailboxes to 100 Mb. Give **two** explanations why employees are limited to mailboxes of this size. (4 marks)

(e) Give **three** explanations why a company would prohibit its employees installing new software on its machines. (6 marks)

End of Section Three

See next page

Section Four: Production **50% (65 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.

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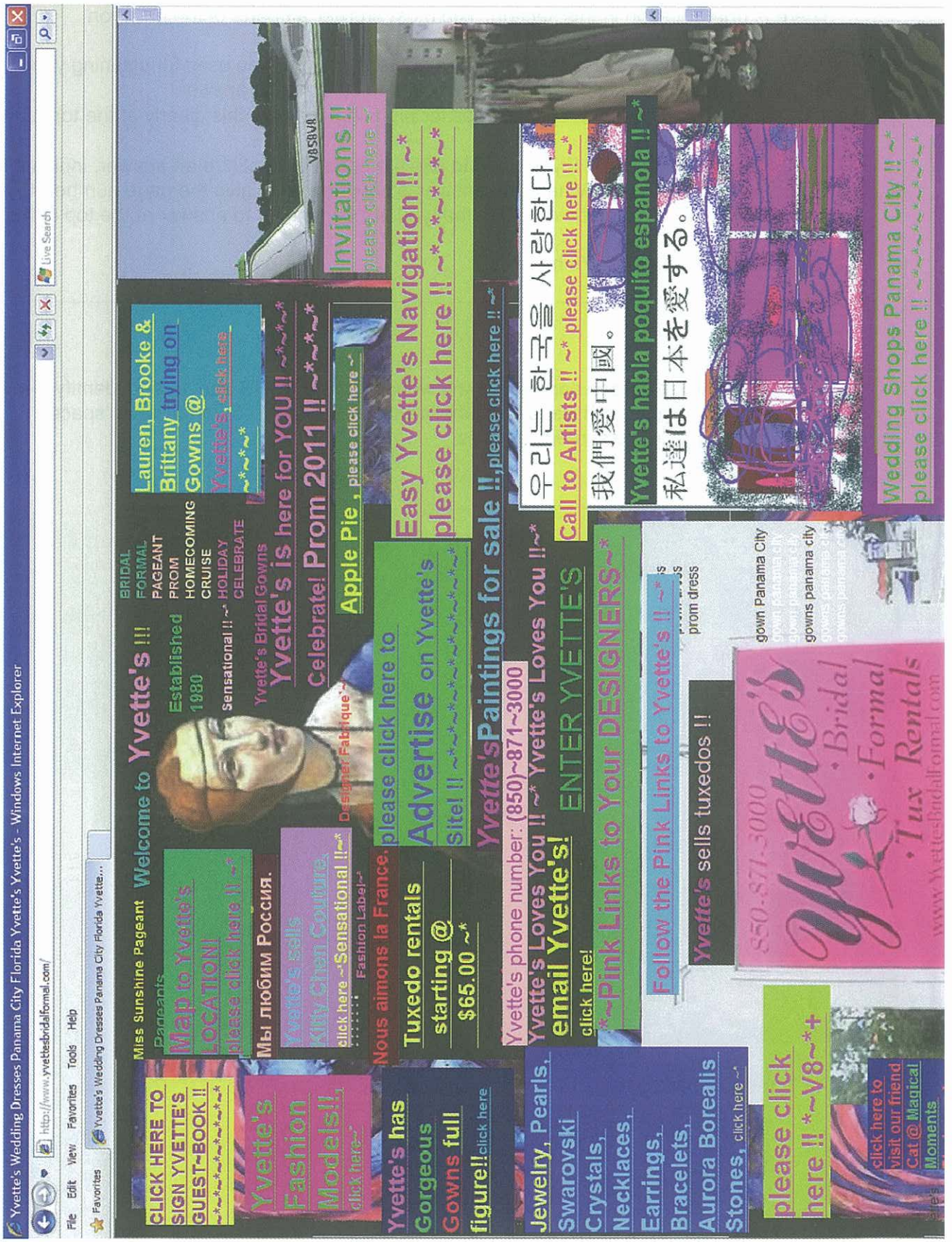
- Continuing an answer: If you need to use the space to continue an answer, indicate in the original answer space where the answer is continued, i.e. give the page number. Fill in the number of the part of the question that you are continuing to answer at the top of the page.

Suggested working time: 75 minutes.

Question 29 **(65 Marks)**

(a) Review the screen captures of the website on pages 18 and 19 and identify **five** design issues. Circle each issue and label it with a number (1–5) in the white space surrounding the screen captures. (5 marks)

See next page



See next page

See next page

(b) Explain the significance of each of the **five** design issues you have identified in part (a). (10 marks)

See next page

(c) Now that you have reviewed the screen captures from the website, your task is to redesign the homepage for the site. Identify **five** design principles you would use to improve the site. Explain why you have selected each of these principles. List the underlying design element(s) for each principle. (15 marks)

See next page

(d) Redesign a home page for the site.

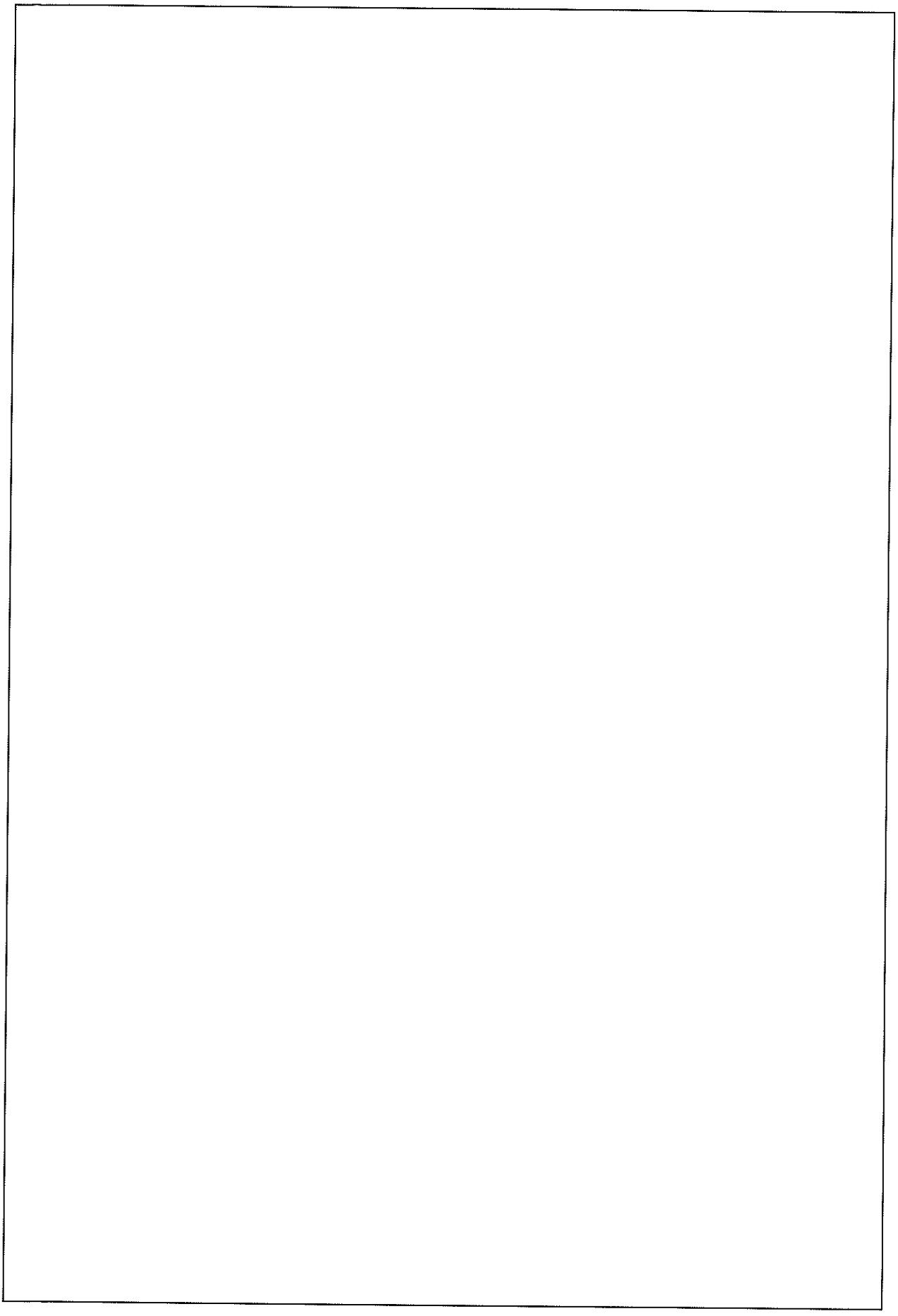
(i) Use an appropriate design methodology to manage your ideas (for example, clear sketches, dimensions, annotations, highlighting where the criteria, listed below, are met). (5 marks)

(ii) Your design is to include the following items to make it clear how to access information. (10 marks)

- company name
- contact us
- women's fashion
- men's fashion
- accounts
- guest book
- social network connection
- photo gallery
- language selection
- site plan

See next page

Yvette's website design



See next page

Additional working space for Yvette's website design
Note: Further working space is provided on pages 32 and 33.

See next page

(e) The website displays a range of products. Select one of the products, e.g. women or men's fashion from the website and design an alternative method for promoting the product to customers. You are not limited to designing a website.

(i) Identify the product you intend to develop and the target audience for it. Discuss **two** design principles and underlying elements that you would use in your design. (10 marks)

See next page

(ii) Using the space below, sketch your design and annotate relevant design principles and elements. (10 marks)
Note: Further working space is provided on pages 34 and 35.

End of questions

Question number: _____

Additional working space

Additional working space

Additional working space.

Additional working space.

Additional working space.

Additional working space.

ACKNOWLEDGEMENTS

Question 29 Yvettesbridalformal. (n.d.). Home page of website. Retrieved March, 2011 from www.yvettesbridalformal.com.

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