



APPLIED INFORMATION TECHNOLOGY

Stage 3

Sample Examination 2009

Marking Key

Section One: Multiple-Choice

20 Marks

Each question is worth **one** mark.

1. Which of the following is a true statement about a 'Data Warehouse'?
 - (a) **It is a repository of an organisation's electronically stored data.**
 - (b) It is a secure building where paper based documents can be stored.
 - (c) The data is stored in separate tables so it is difficult to access and can be isolated.
 - (d) The data is arranged in tables of related records and stored in a warehouse.

2. The network you use at work has a maximum transfer rate of 100 MB/s, but your home network transfers data at 10 MB/s. When you work from home your work requires you to open, close and email a large number of files in TIFF and BMP format. What formats could you convert these files to so that they did not slow down your home network?
 - (a) Leave the files in TIFF and BMP format.
 - (b) Convert the files all to GIF.
 - (c) **Convert the files to JPEG or GIF.**
 - (d) Convert the files to ASCII.

3. A company has 23 Terabytes of data that is spread over a number of servers which are located in various segments of a star network. The data needs to be backed up to a centralised site. What network-cabling medium is best for downloading this amount of data?
 - (a) Coaxial
 - (b) UTP category 5
 - (c) **Fibre optic**
 - (d) Wireless

4. The Copyright Act allows you to use copyright material without permission if your use is considered as 'fair dealing'. Which of the following uses of copyright material is considered acceptable for this purpose?
 - (a) **Critique or review.**
 - (b) Advertising a school play.
 - (c) Promotional sound track for a sports club function.
 - (d) Creating a Help document for senior citizens on Internet banking.

5. Disk defragmentation software allows you to
 - (a) destroy files stored on your hard drive.
 - (b) physically destroy computer hard drives, CD and DVDs.
 - (c) collect broken files and fix them.
 - (d) **maximise space on your hard drive by organising files.**

6. The purpose of benchmarking in relation to the design and acquisition of hardware and software is to:

- (a) mimic a particular type of workload on a component or system.
- (b) assess CPU clock speed and floating point operations per second.
- (c) assist in the comparison of different architectures and applications.
- (d) **measure input and output performance of the system**

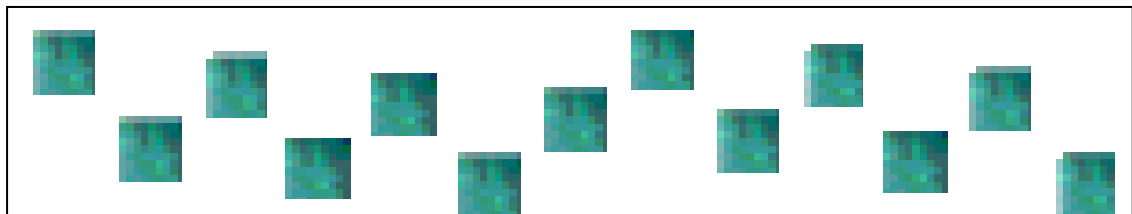
7. Data encryption allows you to:

- (a) **minimise threats to the integrity and security of data.**
- (b) minimise threats to hackers accessing your computer.
- (c) maximise storage capacity on your computer system
- (d) maximise security from computer viruses and malware.

8. A good solution to overcome network bandwidth limitations is to

- (a) increase network connections.
- (b) reduce the size of files and increase the number of files being transmitted.
- (c) decrease the capacity of the communications media within the network.
- (d) **increase the capacity of the communications media within the network.**

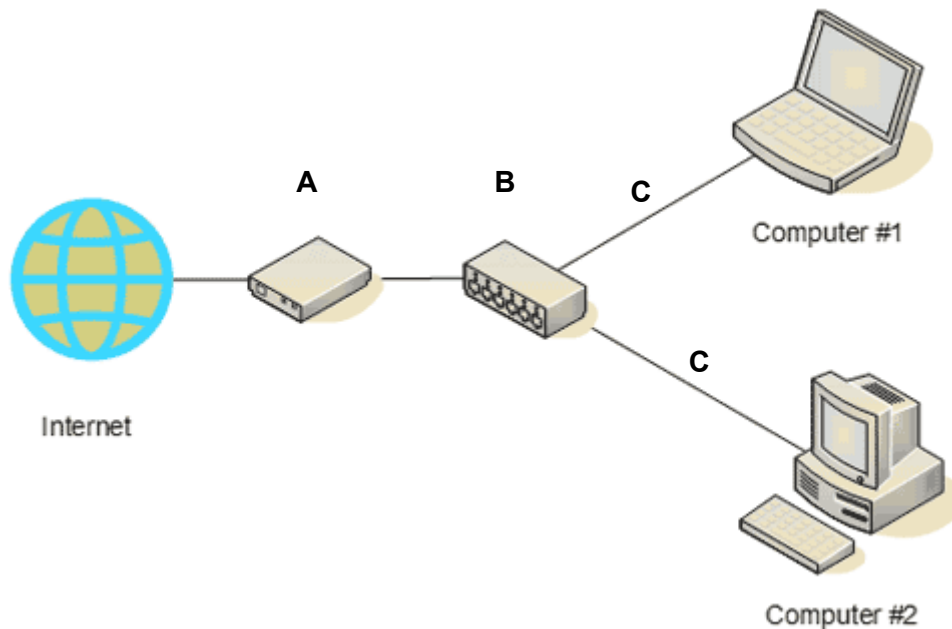
9. The image below demonstrates a principle of design.



This is the principle of

- (a) symmetry.
 - (b) **rhythm.**
 - (c) balance.
 - (d) emphasis.
10. A small scale networked computer hardware system uses a number of protocols such as TCP/IP and HTTP. These two protocols can be described as
- (a) rules that allow the user to communicate with their computer.
 - (b) rules that allow certain applications to communicate with you.
 - (c) Transmission Communication Protocol Internet Protocol.
 - (d) **rules that allow certain applications to communicate over the Internet.**

11. A good method of Internet web form data validation so that
- (a) the server checks data to see if it fits a validation rule.
 - (b) the server checks data to see if it complies with a valid format.
 - (c) all fields are filled in and check that the data fit into a valid range.
 - (d) data is prevented from being submitted to the server until it passes a range of client side validation tests.**
12. The correct labels for A, B and C in the diagram below are
- (a) **A** Switch, **B** Unprotected twisted pair cable and **C** Power cable.
 - (b) A MODEM, B Switch and C Unprotected twisted pair cable**
 - (c) A PCMCIA card, B Power supply and C Fibre Optic cable.
 - (d) A Network card, B Protected twisted pair cable and C cable.



13. You intend setting up a computer network and have advertised for a network administrator with industry based certification. Which qualification abbreviation below would best suit a Novell based network?
- (a) WACE
 - (b) CNE**
 - (c) BSc
 - (d) MCP
14. A 7 mega pixel digital camera creates a 4 megabyte file per photo. The camera has a 2 gigabyte SD card on which to store the photos. If the camera has a compression facility that can compress each file by 50%, what is the maximum number of photos that can be stored on the SD card?
- (a) 256
 - (b) 512
 - (c) 1000**
 - (d) 2000

15. As a victim of identity theft, how would you attempt to resolve your dilemma?
- (a) Ask someone else to collect your mail.
 - (b) Change your bank account details.
 - (c) **Prove yourself innocent to avoid financial costs.**
 - (d) Have someone impersonate you.
16. The function of a graphics tablet as a specialised peripheral device can best be described as
- (a) a pen and clip board based user interface to a computer system.
 - (b) a device that allows users to draw on the computer screen to create graphics.
 - (c) **a stylus-based interface that combined with a tablet, provides a natural way to create computer graphics.**
 - (d) a GUI-based interface that provides a way to create computer graphics.
17. The letters OHS refer to an Act of Parliament. The letters stand for:
- (a) Overuse and Health Syndrome.
 - (b) **Occupational Health and Safety.**
 - (c) Occupational Heart and Safety.
 - (d) Overweight and Health Syndrome.
18. Computer aided manufacturing can be described as
- (a) hardware that assists engineers and machinists to manufacture products.
 - (b) software that assists engineers and machinists to design products.
 - (c) software that assists engineers and machinists to manufacture products.
 - (d) **computer based software that assists engineers and machinists to manufacture products.**
19. To 'act ethically' means that an employee is to
- (a) conform to accepted professional standards of conduct.
 - (b) conduct themselves in a professional manner.
 - (c) act with integrity.
 - (d) **conform to the business' code of conduct.**
20. You wish to download off the Internet a large service pack release (3.2 GB). Which type of Internet connection supports the shortest download time?
- (a) Dialup
 - (b) ISDN
 - (c) **ADSL 2+**
 - (d) Satellite

Section Two: Short Answer

30 Marks

Question 1

(2 marks)

We live in a society that is increasingly dependant on online services, such as purchasing groceries, banking, selling items, meeting people, entertainment and working out how to get somewhere.

What positive impact does the dependence on online services have on society? Provide an example to justify your response.

1 mark for a positive impact and 1 mark justifying it , to a maximum of 2 marks

Possible responses

Users go out less and consequently use less fossil fuel.

Its more efficient so users will have more time to do other things

Less cost on the provider i.e no paper to handle or process

Disabled can make contact with the world

Information more available on medical issues, shopping specials

Social issue forums

2 marks

Question 2

(5 marks)

A multimedia web authoring business has asked you to investigate and compare the operating systems of MS Windows and MacOS as they are currently considering upgrading their current computers systems.

Evaluate the strengths and weaknesses of both operating systems in relation to its intended use and make a recommendation based upon your findings.

1 mark for each valid strength and weekness, to a maximum of 3 marks

Possible responses

MacOS

Very robust and stable (doesn't crash often) and limited amount of 3rd party software available

Created with multi media applications in mind

Low commercial usage

Support not easily found

OS versions are stable

Inability to access core code

3 marks

MS Windows.

Unsecure, against hackers and most computer users can operate this OS

Stable drivers for existing hardware but a lack of driver support for new graphics cards and other devices

High commercial usage

Support easily available

OS versions require numerous service packs to fix bugs

Inability to access core code

Software is widely known

Education courses on how to use it are available

1 mark for a recommendation with 1 extra mark for a valid justification, to a maximum of 2 marks

Possible responses

MacOS

- because it is more stable and the industry standard applications are for MacOS
- well known in multi media industry
- suitable software available
- support is available
- cost effective
- hardware specific

2 marks

MS Windows

- widely known and used
- easily supported
- wide range of training available
- versions stable
- cost of support reasonable and available

Question 3

(8 marks)

A research company has been contracted by a retirement village to conduct a study in preparation for creating a website for its residents and potential clients. An excerpt from the study is provide below.

The research company formed two groups. The members of the first group were senior citizens, had an age structure of 65 years plus, while the second group, the control group, had an age structure of 21–55 years. Both groups require to perform the following:

- Task One: Fact-finding on the internet.
- Task Two: Buying an item online.
- Task Three: Retrieving information from the internet.
- Task Four: Comparing and contrasting websites of a similar nature.

The following table shows selected measurements of four usability attributes averaged across the four tasks.

	Seniors (65+ Years)	Control Group (21–55)
Success Rate (task completed correctly)	52.9%	80.2%
Time on Task (min:sec)	12:33	9.3
Errors (incorrect actions per task)	8.3	0.8

- (a) Explain why the control group is necessary in a study of this nature. (1 mark)

1 mark for a valid response

1 mark

Possible responses

In order to make comparisons between the Seniors and other Internet users.

- (b) The research company is preparing to present a report for the retirement village on its findings. What two significant conclusions can be drawn about possible features that the retirement village should include on their website? Explain the reasons for your conclusions. (3 marks)

1 mark for each significant conclusion with a valid rationale 1 mark, to a maximum of 3 marks

Possible responses

Seniors take longer to find, buy or download so any web site catering for seniors must facilitate easier and hence faster ways to find, buy or download.

3 marks

Seniors have more problems (erroneous actions) so better friendlier error trapping methods should be included.

- (c) Review the three tasks, which were performed by the two groups. Suggest an additional task that the two groups could perform in order to improve the information that the research company would provide to the retirement village. Explain what your task is designed to evaluate and give your reasons as to why it may be relevant. (4 marks)

1 mark for each valid task with valid reasons, 1 mark per valid reason to maximum of 3 marks

Possible tasks

Tasks that relate to the use of a web browser like filling in online forms, use of the tab key so users can avoid using a mouse as seniors may have poor hand eye coordination.

4 marks

A task that determines if a busy web page with lots of multimedia on it distracts seniors from locating information on the page

Question 4

(5 marks)

How could a business with a broadband internet connection use this technology to improve its communication with clients, increase its productivity and establish a more efficient production processes? Use a detailed example to describe how a business could achieve this.

1 mark for each valid suggestion about (at least one from each and within a context of a business):

Communication with clients, how can broadband improve this?

Possible responses

Able to send more information to clients faster.

Increase productivity, how can broadband improve this?

Possible responses

Reduces time to download and upload files especially large files.

5 marks

Efficient production processes, how can broadband improve this?

Possible responses

With increased flow in files, a business will have to organise better ways to manage this data, e.g. faster transfer of files among staff

Question 5

(4 marks)

A company with an in-house network support team that currently administers and maintains the network, wishes to compare alternative methods of network management.

A solution currently being considered by management is **outsourcing** combined with a **service level agreement**. Discuss the advantages and disadvantages of such a solution.

1 mark for each discussed point (advantage or disadvantage), to a maximum of 4 marks

A discussed point should explain what either outsourcing or a service level agreement is and what aspect of that service is an advantage or disadvantage to the company.

4 marks

A Service Level Agreement clearly list services provided by a third part, how they are to be provided and at what agreed levels of availability, downtime, support response time, penalties, escalation procedures etc.

Outsourcing is where the company contracts out services once done by the company itself and then gives it to a third party company to do.

Question 6

(6 Marks)

With the rapid expansion of ICT, workers are required to ensure that their knowledge, skills and qualifications meet industry standards.

- (a) List two changes in the ICT industry and explain why workers will need to ensure that their knowledge or skills are current in order to meet a changing work environment.

(4 marks)

1 mark for each change identified in the ICT industry, to a maximum of 2 marks and 1 mark for each skill or knowledge domain identified as needed to be kept current

Possible responses

Cross platform applications require more Java programming skills

Database mining and management due to more online services being offered.

4 marks

Java programming as it allows new products to be cross platform.

System virtualisation i.e VMWare, etc allows you to run multiple machine instances in one physical device

IPv6 as the Internet moves to this as backbone

PHP use on the internet for data bases

3d Graphics packages – game design, advertising

- (b) Suggest two ways that ICT professionals could maintain contemporary knowledge and expertise.

(2 marks)

1 mark for each valid list item, to a maximum of 2 marks

Possible responses

Attend conferences

Attend training

2 marks

Complete industry certifications

Complete tertiary qualifications – TAFE, Uni

Joining a professional association such as Australian Computer Society

- subscribe to periodicals

- do on-line education courses on new software

- join discussion forums

End of Section Two

Section Three: Extended Answer

50 Marks

Question 1

(25 marks)

Surf Life Saving is conducting its annual National Carnival at Scarborough Beach.

There will be four main event areas. Each event area will consist of a competition tent manned by surf life saving officials and judges. The event areas are:

- Competition tent 1: Swimming.
- Competition tent 2: Beach events.
- Competition tent 3: Rescue boards.
- Competition tent 4: Surf boats.

The National Carnival has over 18,000 entrants. The carnival will cover an area of 1 kilometre of beach near the Surf Life Saving clubrooms. The carnival will run for 2 weeks. The results from the competition tents need to be sent as quickly as possible to the clubrooms so that the carnival officials can update the result sheets. These updated results sheets are required at subsequent events, such as finals.

- (a) Describe the topology, hardware and software components of the networked environment that would enable Surf Life Saving to run the carnival. (10 marks)

Marks are allocated depending on quality of answer, to a maximum of 5 marks. Only allocate either a 1, 3 or 5 mark.

Below is an example of an appropriate solution, but students may offer other solutions

Hardware

5 marks

Wireless network that consisted of... a near complete list of hardware required.

3 marks

Wireless network with a brief but incomplete description of components

10 marks

1 mark

Any other network or a minimal effort to describe a wireless network

Topology

1 mark

A star network

Software

1 mark for client OS

1 mark for server/ network OS

1 mark for Application software, e.g. Meet Manager, Sports Track etc

1 mark for Utility software, e.g. backup, anti virus, security etc.

- (b) Due to the harsh environment of the carnival the efficiency of the network may be adversely affected. Recommend five troubleshooting methods that could be used to prevent or minimise any potential problems created by the environment. (5 marks)

1 mark for each factor explained, to a maximum of 5 marks

Possible Problems (and troubleshooting methods)

Sand could prevent good connections between cables. (wrap in plastic)

Sabotage by the public due to unsecured equipment. (ensure supervision is provided at all times)

Inclement weather like rain may affect transmission or short circuit the componentry thus causing the network to fail/stop working. (provide cover over work area and/or wrap cabling in plastic)

Power outages (use power surge protector)

Theft (lock-in device to secure equipment to furniture such as a desk)

5 marks

- (c) The Carnival has two age groups competing; seniors, who are 18 years of age and over, and juniors who are under 18 years of age. The carnival officials want to place digital photographs of competitors on the official carnival website.

Identify two ethical issues, which may arise with the placement of images of competitors on the official carnival website. Recommend how these issues may be addressed.

(5 marks)

1 mark for each valid issue, with 1 mark for a each valid solution to a maximum of 5 marks

5 marks

Possible Reponses

Publishing photos of young children without parental permission.

Privacy issues i.e. senior may not want to be identified due to

AVOs/hostile partners

- (d) Results are gathered every day and stored on a central database at the clubrooms. Describe the processes and procedures that should be used by surf life saving officials, judges and carnival organisers to minimise possible threats to the integrity and security of the data? (5 marks)

1 mark for each valid solution, to a maximum of 5 marks

Possible threats

Interception – interception of scores, private details of competitors

Injection – injection of false or misleading data into the system

DoS – DoS of servers or DoS of wireless network

Destroy – compromise and execution of good old commands like wipe

*–kQ * or format C: or an SQL injection attack that erases data*

5 marks

Possible Reponses

Intercept – use encryption

Injection – test the application, make sure adequate security/permission levels are in place.

DoS – Wireless

Servers....use of firewalls and rate limiters on bandwidth/connections per second

Destroy – make sure backup/real time redundancy

Secure consoles properly so no one can just “sit down”

Make backup

Store off site at secure location

Make sure temperature, moisture reasonable

Question 2

(25 marks)

Read the following scenario and answer the questions which follow.

Pam works for a large company called CyberSupply. Her work involves managing orders that are placed through CyberSupply's website. Once customers fill out a web form, the order is emailed to her. Pam then verifies that the order can be filled by checking CyberSupply's inventory database. Order details are then entered into the customer database and the warehouse notified by email. The goods are then dispatched to the customer at the billing address.

Pam has started a small on-line business for herself selling craft items that she makes at home. She has developed a website to sell these items. In the times when she is at work and has nothing to do, Pam goes onto her website and checks for orders and updates her web site.

CyberSupply recently discovered that Pam was using company time to manage her small online craft business. Consequently, CyberSupply's management have threatened to terminate Pam's employment. It is Pam's belief that the threat of termination is unfair. Her justification is that there are times when she has no work related tasks; she pays for her own website and besides management has not clearly stated whether or not she could not use the Internet for personal business.

- (a) Discuss what ethical issues are created by Pam using CyberSupply's time and computer equipment to conduct personal business. (5 marks)

1 mark for each valid issue, to a maximum of 5 marks

Possible Responses

Theft of the companies time

Inappropriate use of the company's equipment.

Theft of bandwidth

Degradation of bandwidth, use of bandwidth by Pam will impact

CyberSupply network response rates and ultimately ability to transmit data

5 marks

From an alternative perspective:

If Pam has been subtracting the time from her allowable breaks and the company has no statement about personal use in their policy she actually has done nothing wrong. Thus it is not an issue.

Cybersupply should provide staff with a clear outline of acceptable use of the Internet before threatening termination. In fact, the policy should outline dismissal as one of the possible outcomes.

Possible theft of customers from company

As a result of discussions with CyberSupply's management, Pam has arranged with CyberSupply to work from home and will be paid an hourly rate. She provides CyberSupply with a time sheet detailing the work she does each day. Pam invoices CyberSupply for the cost of her home monthly Internet connection plus any other expense incurred while working for CyberSupply.

- (b) Discuss five advantages for CyberSupply if Pam was to work from home.

(5 marks)

1 mark for each advantage discussed, to a maximum of 5 marks

Possible Responses

5 marks

No expense to provide furniture

No need to provide water, toilets etc.

Downsize the office to smaller cheaper premises

Only pay for work done not time at work

Now that Pam works from home, she needs to set up new processes and procedures to deal with not being in the office at CyberSupply.

- (c) List five work processes or procedures that Pam will need to adopt to ensure that while working from home she will be able to fulfil her contractual obligations to CyberSupply **and** suggest what changes to those processes and procedures that Pam will have to implement as she now works from home.

(10 marks)

1 mark for each change mentioned and 1 mark for the comparison, to a maximum of 10 marks

Possible Responses

Face to face meeting in the office now have to done over the phone or by email or via video conferencing e.g Skype or netmeeting

Track her work times better by keeping a running log – she worked set hours

10 marks

Maintain her own equipment – equipment was provided

Purchase and maintain her own software – software was provided

OSH – she will be fully responsible for OSH – previously the employer had obligation to provide safe work environment.

Secure logon procedures

Use of phone for work

Logging hours worked and work done

Forwarding time sheets

Pam has two children aged 7 and 10 years old. Managing a family and work responsibilities is an area that Pam now has to consider more carefully, as her home and her place of work are the same. Pam will need to reconfigure her home and work environment.

- (d) Discuss five financial impacts that the Occupational Safety and Health Act may have on Pam if she is to make her home a safe work environment. (5 marks)

1 mark for each valid problem and its solution, to a maximum of 5 marks

Possible Responses

Locks on internal doors into her office. Safety

Floor covering will have to be anti static and safe for a chair with castors

Increased ventilation if the room is internal with no windows

Desk and computer equipment must be configurable in height and viewing angle, anti glare filters and ergonomic mouse and chair

5 marks

End of Section Three

Section Four: Production

100 Marks

This question is divided into five parts to allow candidates to focus on specific aspects of the production process. Candidates should however, consider each part as connected with and a development of previous parts when responding to the questions required.

An overview of the five parts is as follows:

- A. **Pre-design** – Analyse information provided. (20 marks)
- B. **Design** – Design a product. (15 marks)
- C. **Analysis** – Critically analyse a design. (25 marks)
- D. **Re-design** –reconsider your design. (15 marks)
- E. **Review** – reflect upon all aspects of the aforementioned parts and review the product within the context of a global market. (25 marks)

Overview

Global markets cross multiple and diverse cultural, socio-economic and ethic contexts. Companies that function within global markets need to design their products and/ or services so that they are recognised easily and can maintain a competitive edge. Corporate and product branding is one of the ways that companies can negotiate the multiple contexts of global markets and achieve instant recognition.

Corporate branding can take many forms. Examples of media rich branding could include; web banners, animated pop-ups, Flash animations, logos and AVI's.

In addition to the strategy of 'branding' companies are investing in other business's so that they can promote their company through another website.

The Pepsi website is a good example of 'branding' a product and diversification.

Stimulus material A and B has been provided to assist you. The images were provided courtesy of Pepsi (<http://www.pepsi.com>)

A recently formed company called Recycles Waste Packaging (RWP), has viewed the Pepsi website and has identified a potential marketing environment, which could promote and complement its exposure. The company RWP currently does not have a website; however, it has established Waste Packaging collection sites worldwide. RWP believes that their ethos to reduce waste worldwide will be supported by Pepsi.

RWP has hired you as a web page designer who has specialist skills in web design, graphic design and the use of multimedia techniques. Your task is to create a cooperate brand that will promote the company and provide an internet presence. As well, you will be required to create a variant of the 'pop-up' that will be marketed to Pepsi. The purpose of the 'pop-up' variant is to be posted on the Pepsi website.

Part A Pre-design**(20 marks)**

In preparation for designing a 'pop-up' to promote RWP, you are required to critically evaluate the stimulus material B, considering target audience, design elements and principles.

Target audience (mark allocation)

1 Mark	2 Marks	3 Marks	4 Marks
Identifies basic characteristics of the target audience (such as gender/age etc), with minimal links to the stimulus material.	Describes and attempts to analyse the characteristics of target audience (such as gender, age, language, knowledge and skill levels, culture, spending power and social status) and links these with the stimulus material.	Analyses most of the characteristics of the target audience (such as gender, age, language levels, knowledge and skill levels, culture, spending power and social status etc), and links these characteristics with the stimulus material.	Critically analyses the characteristics of the target audience and maintains critical links with the stimulus material.

Design principles (mark allocation)

1–2 Marks	3–4 Marks	5–6 Marks	7–8 Marks
Identifies at least one design principle with a basic explanation of its usage in the stimulus material.	Identifies at least 2 design principles with an attempt to discuss their usage in the stimulus material.	Identifies some of the design principles and analyses their usage in the stimulus material.	Identifies some design principles and critically evaluates their usage in the stimulus material.

Design elements (mark allocation)

1–2 Marks	3–4 Marks	5–6 Marks	7–8 Marks
Identifies at least one design element with a basic explanation of its usage in the stimulus material.	Identifies at least 2 design elements with an attempt to discuss their usage in the stimulus material.	Identifies more than 2 design elements and analyses their usage in the stimulus material.	Identifies most design elements and critically evaluates their usage in the stimulus material.

Part B Design

(15 marks)

- (i) With consideration of the intent of branding a product so that it is able to be recognised in global markets, design a 'pop-up' for RWP's website. (5 marks)

Design of a web page 'pop-up' appropriate to its intended use (mark allocation)

1	2	3	4	5
Minimal attempt made at sketching a website 'pop-up'. Limited use of design elements and principles.	The web page 'pop-up' uses some design elements and principles with limited connection with the RWP's business.	The web page 'pop-up' covers the functional requirements of RWP with some application of design principles.	The web page 'pop-up', uses design elements and principles to clearly identify critical aspects of RWP's business and targets potential customers.	Final web page, 'pop-up' has been designed in creative and original ways, considering the purpose of branding and audience.

- (ii) Using the information from your critical evaluation of the stimulus material B as well as appropriate planning and design methodologies develop a variant of the 'pop-up' to promote RWP on Pepsi's website. (10 marks)

Design of a variant 'pop-up' appropriate to its intended use (mark allocation)

1	2	3	4	5
Minimal attempt made at sketching a website 'pop-up'. Limited use of design elements and principles.	The website 'pop-up' uses some design elements and principles with limited to no incorporation of the critical evaluation of the Stimulus material B in the design.	The website 'pop-up' covers the functional requirements of RWP with some incorporation of the critical evaluation of the Stimulus material B in the design.	The website 'pop-up', uses design elements and principles to clearly engages with the critical evaluation of the Stimulus material B and appropriately targets the audience.	The website, 'pop-up' has been designed in creative and original ways, considering purpose, audience, and the critical evaluation of the Stimulus material B .

Use appropriate planning and design methodologies (mark allocation)

1	2	3	4	5
Minimal evidence of planning and variation of design (when compared with the 'pop-up' for RWP's website).	Some evidence of variation to the design (when compared with the 'pop-up' for RWP's website) through sketches and annotations.	Evidence of variation to the design with consideration of the 'pop-up' for RWP's website through planning, sketches and annotations.	Clear evidence of managing progression of ideas and consideration of the 'pop-up' for RWP's website. Annotations, checklists etc. are present.	A systematic method is used to demonstrate variation ideas and design is evident in the layout of designs and information presented.

Part C Analysis

(25 marks)

- (i) Discuss the intent of your 'pop-up' design in Part B (ii) with reference to your critical evaluation of stimulus material B. (15 marks)

Synthesis of ideas (Target audience) mark allocation

1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
Minimal attempt at linking the design to target audience characteristics identified in Part A.	Links some parts of the design to some of the characteristics identified in Part A and presents a limited discussion of their intended effectiveness .	Links some parts of the design to some of the characteristics identified in Part A and presents discussion on their intended effectiveness.	Clearly links the intent of the design to most of the characteristics identified in Part A and presents a sound discussion on their intended effectiveness.	Clearly links the intent of the design to the majority of the characteristics identified in Part A and presents a thorough discussion on their intended effectiveness.

Synthesis of ideas (Design principles) mark allocation

1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
Minimal attempt at linking the intended use of design principles to the characteristics identified in Part A.	Makes some links to use of design principles to some of the characteristics identified in Part A and presents a limited discussion of their intended effectiveness.	Links the design principles to the characteristics identified in Part A and discusses their intended effectiveness.	Clearly links the intent of the design principles to most of the characteristics identified in Part A and presents a sound discussion on their intended effectiveness.	Clearly links the intent of the design principles to the majority of the characteristics identified in Part A and presents a thorough discussion on their intended effectiveness.

Synthesis of ideas (Design elements) mark allocation

1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
Minimal attempt at linking the intended use of design elements to the characteristics identified in Part A.	Makes some links to use of design elements to some of the characteristics identified in Part A and presents a limited discussion of their intended effectiveness.	Links the design elements to the characteristics identified in Part A and discusses their intended effectiveness.	Clearly links the intent of the design elements to most of the characteristics identified in Part A and presents a sound discussion on their intended effectiveness.	Clearly links the intent of the design elements to the majority of the characteristics identified in Part A and presents a thorough discussion on their intended effectiveness.

- (ii) Explore present and emerging ICT trends that you have or could have applied in your 'pop-up' design. (10 marks)

Present and Emerging Trends (mark allocation)

1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
Identifies at least one possible trend but does not provide reasons to support it/them.	Identifies one or more trends with limited or tenuous supporting evidence.	Identifies one or more trends which are supported with evidence.	Identifies two or more trends which are well supported with evidence.	Identification of trends with supporting evidence and reference to possible future implications for the ICT industry or users.

Application to your 'pop-up' design (mark allocation)

1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
Statements of what and why they have designed their 'pop-up' in a particular was	Attempts to link what they have or liked to have done in their design with reference to one or more trends.	A good explanation of what they have or could have done in their design with reference to one or more trends.	A detailed exploration of what they have or could have done in their design with reference to two or more trends.	An in-depth exploration of possible design improvements based on the trends identified

Part D Re-design

(15 marks)

- (i) Consider the specific requirements of computer users with disabilities. Modify with appropriate annotations your design from Part B (ii) to reflect these specific users' needs.

Rationale for Possible changes (mark allocation)

1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
Minimal identification of requirements with limited/tenuous connection with design and/or knowledge of disabilities.	Identification of some requirements with limited connection with design and/or knowledge of disabilities.	Identification of some requirements which are mostly connected with design and/or knowledge of disabilities.	Identification of requirements which are connected with design and/or knowledge of disabilities.	A range of requirements are identified which are connected with their design and demonstrates a clear understanding of disabilities.

Changes (mark allocation)

1–2 Marks	3–4 Marks	5–6 Marks	7–8 Marks	9–10 Marks
Minimal attempt to modify the design with limited annotations.	Some modifications to the design which are accompanied with some annotations.	Modifications to the design which are accompanied with some annotations which explore alternatives for each modification.	Presents a range of modifications accompanied with annotations which explore alternatives for each modification.	Presents an range of appropriate modifications accompanied with annotations which explore a range of alternatives for each modification which include solutions from a range of perspectives.

Part E Review

(25 marks)

In a global market, Internet users are making decisions that affect the life expectancy of web sites.

- (i) Analyse factors identified in your redesigned 'pop-up' from Part D that reflects modern web design trends. (10 marks)

References to design in part D (mark allocation)

1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
Reference to their design is made but not involving identified factors	Some factors are poorly referenced back to their design	Some factors are referenced back to their design	All factors (3 or more) are referenced back to their design	All factors (5 or more) are referenced back to their design

Discussion(mark allocation)

1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
Minimal attempt to present a discussion	Provides some aspects of web design trends in the discussion	Attempts to explore a few web design trends in the discussion	Presents a limited range of good alternatives in their discussion on modern web design trends	Presents a range of good alternatives in their discussion on modern web design trends

- (ii) The purpose of a review is to identify gaps in existing processes and procedures and then suggest improvements in order to maximise the effectiveness of ICT solutions against the design criteria.

Review the processes of parts A, B, C and D. Identify gaps in the existing processes and suggest improvements that could be made to maximise the effectiveness of ICT solutions for RWP's design criteria. (10 marks)

The process (mark allocation)

1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
Limited understanding of existing processes and/or procedures.	Describes the steps taken for existing processes and/or procedures with limited comparisons with the technology process.	Identifies the steps taken for existing processes and procedures and attempts to make comparisons with the technology process.	Clearly identifies the process and procedures and makes reference to and comparisons with the technology process.	Clearly identifies the process and procedures why each step is present. Reference to and comparisons with the technology process maintained throughout.

Review (mark allocation)

1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
Makes minimal suggestions as to what processes could be improved.	Makes some suggestions as to what could be improved in the processes.	Makes some suggestions as to what could be improved in the process used and some possible consequences.	A range of suggestions are made and explored to provide possible consequences that these changes may bring.	Identifies gaps in processes and procedures, suggest improvements in order to maximise the effectiveness of ICT solutions against the design criteria.

- (iii) What present or emerging technologies could be used on the Pepsi website to increase RWP's market presence? (5 marks)

Present and emerging technologies mark allocation

1 Mark	2 Marks	3 Marks	4 Marks	5 Marks
2 or less technologies affecting website design in today's global market are identified.	3 or less technologies affecting website developers in today's global market are identified.	4 or less technologies affecting website design in today's global market are identified.	5 or less technologies affecting website design in today's global market are identified.	More than 5 technologies affecting website design in today's global market are identified.

End of paper