



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education
Advanced Subsidiary Level and Advanced Level

THINKING SKILLS

9694/04

Paper 4 Applied Reasoning

October/November 2008

1 hour and 30 minutes

Additional Materials: Answer Booklet/Paper

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the booklet.

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

Do not use staples, paper clips, highlighters, glue or correction fluid.

DO NOT WRITE ON ANY BARCODES

Electronic calculators should be used.

Answer **all** the questions.

Start each question on a new answer sheet.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question.

This document consists of **12** printed pages.



1 Study the following evidence and answer the questions which follow. Show your working.

Zatorski's Firework company has been asked to perform a display to celebrate the opening of a new nightclub. The nightclub has a budget of \$1000 and has a number of wishes for the display:

- It should last at least 10 minutes
- It should have an impressive finale
- There should be a variety of fireworks
- It should be visible from across the town.

In order to clarify exactly what the nightclub wants and to avoid disappointment, Zatorski proposed the following Requirements and Additional Desirable Outcomes. These were accepted by the nightclub.

Requirements
1. The display must last at least 10 minutes (i.e. 600 seconds).
2. The finale must last at least 30 seconds and have a mean WOW factor of at least 4. The WOW factor is explained below.
Additional Desirable Outcomes (if budget allows)
3. There should be at least one of each type of firework.
4. For at least 40% of the duration of the display, it should be visible from 2km away or more.

Table 1

The following types of fireworks are available.

Firework Type	Cost (\$)	Time (seconds)	Visibility (km)	WOW factor
Catherine wheel	50	40	0.5	*
Fountains	30	16	2	* *
Flashes	25	9	1.5	* * * *
Rockets	20	8	4	* * *
Stellar rockets	60	15	5	* * * * *

Table 2

Zatorski have a safe but simple mechanism for setting off the fireworks, which enables each of them to be ignited as the previous firework finishes. This ensures that there are no gaps, and no multiple ignitions. The times given show the length of time from igniting to finishing.

The WOW factor is a result of a customer survey. It measures the impact of the firework on the audience. As such it is not affected by the length of time of the firework. For example: the mean WOW factor of one fountain and two flashes would be $(2 + 4 + 4) \div 3 = 3\frac{1}{3}$ stars.

- (a) Clearly stating how many of which firework(s) are required, and how much it would cost:
- (i) What is the cheapest way of delivering the finale? [2]
 - (ii) What is the cheapest way of delivering the whole display (considering only requirements 1 and 2)? [3]
- (b) Given that the requirements 1 and 2 must be satisfied, investigate whether it is possible to satisfy the additional desirable outcomes 3 and 4 within the budget of \$1000. Clearly show any attempted solutions made in the process of the investigation. State what combination of fireworks you propose, if it is possible. [5]

2 Study the following information and answer the questions which follow. Show your working.

Flights operate							Local time			
Mon	Tue	Wed	Thu	Fri	Sat	Sun	Departure		Arrival	
✓			✓	✓	✓	✓	MAN	06:05	AMS	08:30
							AMS	11:10	SFO	13:05
							SFO	15:15	HNL	18:35
✓		✓		✓	✓	✓	MAN	08:15	AMS	10:40
							AMS	13:05	SEA	14:15
							SEA	17:20	HNL	21:15
✓	✓				✓	✓	MAN	09:10	CDG	11:35
							CDG	13:15	LAX	15:45
							LAX	18:35	HNL	22:20
	✓	✓	✓	✓			MAN	11:25	AMS	13:50
							AMS	15:20	NRT	10:40 *
							NRT	21:30 *	HNL	09:20 *
	✓		✓			✓	MAN	19:20	AMS	21:45
							AMS	08:10 *	LAX	10:25 *
							LAX	14:45 *	HNL	18:15 *

* indicates arrival / departure next day

Table 3: Weekly schedule of flights to Honolulu from Manchester

<u>Airport Codes</u>	<u>Country</u>	<u>Local Time</u>
AMS Amsterdam (Schiphol)	Netherlands	GMT + 1 hour
CDG Paris (Charles De Gaulle)	France	GMT + 1 hour
HNL Honolulu	USA	GMT – 10 hours
LAX Los Angeles	USA	GMT – 8 hours
MAN Manchester	UK	GMT (Greenwich Mean Time)
NRT Tokyo (Narita)	Japan	GMT + 9 hours
SEA Seattle	USA	GMT – 8 hours
SFO San Francisco	USA	GMT – 8 hours

Table 4: Airport Codes

- (a) How long do passengers travelling via Paris and Los Angeles have to wait for the connection at Los Angeles Airport? [2]
- (b) What is the flight time from Amsterdam to Seattle? [2]
- (c) Which route has the shortest total journey time (including waiting times) from Manchester to Honolulu? What is the total journey time via this route? [3]
- (d) Richard is due to attend a conference in Honolulu next Thursday at 9am. He will not be able to leave Manchester until after 3pm on Tuesday.
- (i) What departure times from Manchester are available to him? [2]
- (ii) Which **one** of these would you recommend to Richard? Briefly explain why. [1]

3 Study the following evidence and answer the questions below.

- (a) Outline the structure of the argument in Document 1, identifying the reasons and conclusion(s). [4]
- (b) Examine Document 2.
- (i) Which **one** of the two complaints, A or B, would have been upheld by the ASA? [1]
- (ii) Which of the following CAP codes did HFL breach, with respect to the complaint you have identified in (i)? [2]
- CAP 3.1 – Substantiation
 - CAP 7.1 – Truthfulness
 - CAP 9.1 – Fear and Distress
- (iii) Identify **two** points of strength and/or weakness in HFL's reasoning, to support the answers you have given to (i) and (ii). [5]
- (c) With critical reference to Documents 1-5 and examples from your own experience, discuss the causes of irresponsible advertising and propose a well-reasoned argument **either** for **or** against greater regulation of the advertising industry. [18]

DOCUMENT 1

Human Commodities

Have you noticed that the profile of the human being 'homo sapiens' has been mutating into an evolutionary freak 'homo economicus'? Modern growth economy, which operates through the advertising industry, presents the human being as a self-interested individual, whose main quest is for financial gain. But in fact the growth economy only succeeds by a massive manipulation of the consumer i.e. by reconstructing the human image for the consumer.

Take, for example, the central contention that the market enhances our freedom. Vane Packard in his 1957 classic *The Hidden Persuaders* shows how the advertising industry makes a mockery of the claim that the consumer society expands our freedom of choice. He demonstrates how advertisers were able to turn around failing products by changing the shape of labels. We are told that we are being offered novelty and variety, but in truth we are being persuaded to accept gimmicks.

Of course advertisers can ask what is wrong with persuasion: it goes on in a small way even in local markets. The German sociologist, W.F. Haug, gives the answer in his *Critiques of Commodity Aesthetics* (1967). 'How is it that clever and competent people don't make it in their careers?' asked a wool advert. 'Don't call it bad luck; it is only a matter of packaging. You can sell yourself in a new suit! And that is often what counts in life.' Appearance, display and the management of impressions are what count. The individual has to sell himself / herself as if they were a commodity. Effectively, then, the advertising industry turns us all into commodities.

This is illustrated by the vast expansion we see today of the cosmetic surgery industry. Procedures such as liposuction, breast augmentation and collagen injections all aim to make people, especially women, more desirable commodities in the sexual market place, conforming to the advertising image. The ordinary condition of men and women becomes a matter of shame, leading to the rise in anorexia and bulimia, above all in young people.

The advantages of high tech comfort products allow people to lead less physically demanding lives. But if you have a less physically active life that is a plus factor for the economy: it sells it back to you in fitness centres, aerobics and sport. Advertising does not just sell us products, but the human image, packaged as power, sexuality and freedom.

Think how amazing in reality this manipulation is. The economy no longer exists to serve human needs, but human needs have to be distorted to serve the expanding market. Clearly we are now entrapped in a consumerist web: we need an 'about-turn' and this can be done only by a new ethic.

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DOCUMENT 2

How Accurate?

All advertising in the UK must comply with the CAP (Committee of Advertising Practice) codes. Complaints made against advertisements are investigated and adjudicated by the Authority for Standards in Advertising (ASA). The ASA is the independent regulator of advertisements in the UK. Three of these CAP codes are:

CAP 3.1 Substantiation:- All marketers must hold documentary evidence to prove that all claims within the advert, whether direct or implied, are capable of objective substantiation¹. Relevant evidence should be sent without delay if requested by the ASA (in the event of complaints).

CAP 7.1 Truthfulness:- No marketing communications should mislead, or be likely to mislead, by inaccuracy, ambiguity, exaggeration, omission or otherwise.

CAP 9.1 Fear and Distress:- No marketing communication should cause fear or distress without good reason. Marketers should not use shocking claims or images merely to attract attention.

Where a complaint is made against an advertisement to the ASA, the ASA can take either of these decisions after due investigation: (i) If the advertiser is judged to have breached a CAP code seriously enough ASA will ask the advertiser to withdraw the advert or (ii) if the ASA deems that the advert has not been blatantly untruthful it will allow the advert to pass, but will give guidance or recommendation to the company for future adverts of the kind, so that any weak or ambiguous aspects are corrected and future advertisements adhere to the relevant CAPs.

The following is an adjudication of a complaint brought against HF Lab (HFL) and HFL's argument in defence.

The Advertisement

A magazine advertisement for Chlorx Allergy Tablets claimed: 'Although pollen is Britain's most common allergen², you may not be aware that around 103 000 people are allergic to leather, 644 000 to house dust and 181 000 to squirrel fur. The fact is, people can develop an allergy to just about anything'. A labelled photograph made claims for the number of Britons allergic to: 'photocopier toner dust; tomatoes; sweat; squirrel fur; dust; breath spray; rats; acrylic glue; wasp stings and hair dye'. Small print at the bottom of the advertisement stated: 'Allergy figures extrapolated from a consumer survey of 16-64 year olds by the company TNS'.

Complaints A and B

A member of the public made two complaints (A and B). He challenged:

- A. whether the advertisement was misleading, because he believed not all the materials listed caused allergic reactions; some caused only irritation or adverse (non-allergic) reactions and he believed those could not be treated with the product.
- B. the accuracy of the claimed number of people allergic to each substance, because the numbers were derived from a survey in which the diagnoses of allergies were made by the respondents themselves rather than by doctors.

¹ verification

² substance causing allergic reaction

HFL's Response to the ASA probe

1. To substantiate their claim in the advertisement, HFL sent the ASA a copy of the Summary of Product Characteristics from the product licence issued by the Medicines and Healthcare products Regulatory Agency (MHRA) which stated Chlorx allergy tablets could be used to control allergic conditions such as food allergy and insect bites. HFL said squirrel fur, rats and dust caused allergic rhinitis and sent information from the National Health Service (NHS) that supported this. They sent medical papers that stated that allergic skin disorders could be caused by: acrylic glue, breath spray, hair dye, leather and photocopier toner dust. They sent two medical papers that showed that people could have allergic reactions to their own sweat.
2. HFL said 4166 UK adults aged between 16 and 64 years had responded to their questionnaire. They said the results were then extrapolated (i.e. extended proportionally by inference) to the UK population as a whole.
3. HFL said the advertisement made clear that the numbers of allergy sufferers had been derived from a survey and therefore this could not imply that all the diagnoses had been made by medical professionals. They acknowledged that there was a risk that respondents could incorrectly categorise themselves as allergic to a substance when the basis of their reaction was actually a result of simple irritation, but said the survey had been designed to minimise the number of respondents who made that error by listing the common symptoms of an allergic response. They gave an example of a typical question: 'Which of the following foods do you suffer an allergic reaction to? By allergic reaction we mean symptoms such as itchy, redness, swelling, tenderness and irritation. You may also get itchy or runny eyes or nose'. HFL said respondents who merely felt something 'disagreed' with them or 'were sensitive to' a substance would be unlikely to describe themselves as suffering from those symptoms. HFL said itching was a typical symptom of an allergy. HFL said they had not included symptoms such as pain or soreness, because those were likely to be the result of irritation or adverse (but not allergic) reaction.
4. HFL argued consumer surveys were frequently used to estimate the prevalence of diseases, in order to advertise health care products. Where symptoms were particularly mild, often people did not see their doctors, but self-diagnosed and treated themselves by buying allergy products from the chemist's shop. In the absence of good research studies in the UK on various allergies, HFL believed that consumer studies were suitable to estimate the prevalence of the allergies.

Decision

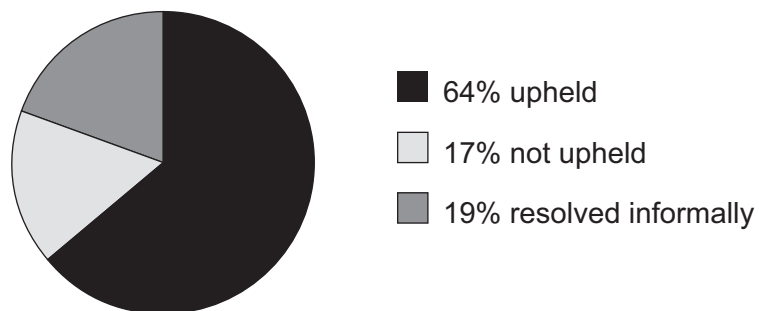
The ASA upheld one of the two complaints made to it, as having breached two CAP codes. The other complaint was dismissed.

DOCUMENT 3

Advertising Standards Authority Statistics:

Complaints Investigated in 2002

Complaint Category	Number of Complaints
Legality	47
Decency	3142
Honesty	520
Truthfulness	2682
Substantiation	1722
Comparison	801
Denigration	248
Exploitation of goodwill	43
Imitation	16
Matters of opinion	78
Fear and distress	980
Safety	85
Violence and anti-social behaviour	455
Political advertising	47
Protection of privacy	33
Testimonials and endorsements	110
Prices	79
Free offers	35
Availability of products	115
Guarantees	21
Identifying advertisers and recognizing advertisements	247

Complaints Investigated represented as Pie Chart

DOCUMENT 4**Runaway Consumerism**

The mayhem caused by a 40-day 'cute' marketing promotion by American food giant McDonalds raises as many questions about consumerism as about McDonalds' marketing strategies. McDonalds' promotional offer was that customers who bought certain meal packages would get a doll of their choice. Since the promotion started on New Year's Day, there have been reports of fist fights, traffic jams, broken glass and people fainting from sheer fatigue in queues that start forming by early evening on Wednesdays for the Thursday morning release of a new set of dolls. On January 27th, even before McDonalds' outlets opened for business in the morning, more than 250 000 people waited outside to get their hands on 'Hello Kitty Romantic Couple' dolls dressed in wedding garb.

McDonalds has been accused of cold-blooded commercial opportunism. The Federation of Merchants' Association has rightly pointed out that McDonalds is in the burger business, not the toy business. However the McDonalds newspaper advertisements promoted the toys and not the food, and this ingenuity is all the more culpable in the light of the fact that many people throw away the hamburgers after getting the dolls.

But should McDonalds be seen as the sole culprit in this episode of runaway consumerism? What makes otherwise sensible citizens take time out to join endless queues like 'Pavlovian dogs, tongues hanging out, for hours and hours, for a silly toy' as one person put it? It is time for these affluent residents to undertake some soul-searching about their consumer mentality. The fact is – they do not know how to defend themselves against mindless consumerism. Relatively rich and unerringly brand-conscious, they have become a captive market where the latest gimmicks are consumed eagerly and upgraded constantly.

This kind of consumer mentality has been labelled by a psychiatrist as 'the compulsive acquisition syndrome'. The queue becomes more than just a queue. McDonalds makes it the only way to achieve the status of owning a Kitty collection. They have to have something everyone else has, even if it is not worth having it.

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DOCUMENT 5**Who is paying?**

The day I dreaded. Eunice marched me into Selfridges³, had assistants scurrying this way and that for jackets and shirts. Waved her gold credit card around as if she was Imelda Marcos, overlooking the fact that it is always me that picks up the bill. The anticipated fight soon came. 'Try that on, Bernard. That'll be lovely for winter.'

'But look', I exploded, 'It says 'Expedition Leader' on the back. What nonsense. What expedition?'

'Don't be so literal, Bernard,' Eunice reasoned, 'It's just the style.'

'So lying is the style? I am not walking around wearing a lie. And who is 'Ultimate Endeavour'?'

'It's the label.'

'Why can't they write it discreetly inside the collar? Not emblazon it in embossed two inch leather letters down the sleeves.'

'You're making a scene.'

'Look, if this lot want me to wear an advertising billboard they will have to pay. There are perfectly good plain £70 outdoor jackets there. As far as I can see, at £160, I'm paying them £90 to wear their adverts. Does Independent Television pay Procter and Gamble to advertise soap powder? Does the Financial Times pay Morgan Stanley to advertise its financial services? Of course not, so I'm not doing it either.'

Bernard Jones

³ A UK Department Store

Copyright Acknowledgements:

Document 3
Document 5

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