



# Victorian Certificate of Education 2011

## General Achievement Test

Thursday 16 June 2011

Reading time: 10.00 am to 10.15 am (15 minutes)

Writing time: 10.15 am to 1.15 pm (3 hours)

### QUESTION BOOK

#### Structure of book

<i>Type of questions</i>	<i>Number of questions to be answered</i>	<i>Suggested times (minutes)</i>	<i>Suggested time allocation</i>
Writing Task 1	1	30	10.15 – 10.45
Writing Task 2	1	30	10.45 – 11.15
Multiple-choice questions	70	120	11.15 – 1.15

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners, rulers, and an English and/or bilingual dictionary.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.
- No calculator is allowed in this examination.

#### Materials supplied

- Question book of 36 pages.
- Answer book for **both** Writing Task 1 and Writing Task 2.
- Answer page for multiple-choice questions on page 15 of the answer book.

#### Instructions

- Write your **student number** and **student name** on the answer book.
- Write your **student name** on the answer page for multiple-choice questions on page 15 of the answer book.
- Follow the times suggested for each task.
- You may complete tasks in any order and you may return to any task at any time.
- Do not waste time on one particular multiple-choice question. If you find a question very difficult, return to it later.
- Answer all questions.
- All written responses must be in English.

#### At the end of the test

- You may keep this question book.

**Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.**

Streamlined shape –  
can reach speeds of 65 km/h

### WRITING TASK 1

To be answered in the answer book in pen, not pencil. You are advised to allocate 30 minutes to this task.

Consider the information on these two pages. Develop a piece of writing presenting the main information in the material. You should **not** present an argument.

Your piece will be judged on:

- how well you organise and present your understanding of the material,
- your ability to communicate the information effectively, and
- how clearly you express yourself.

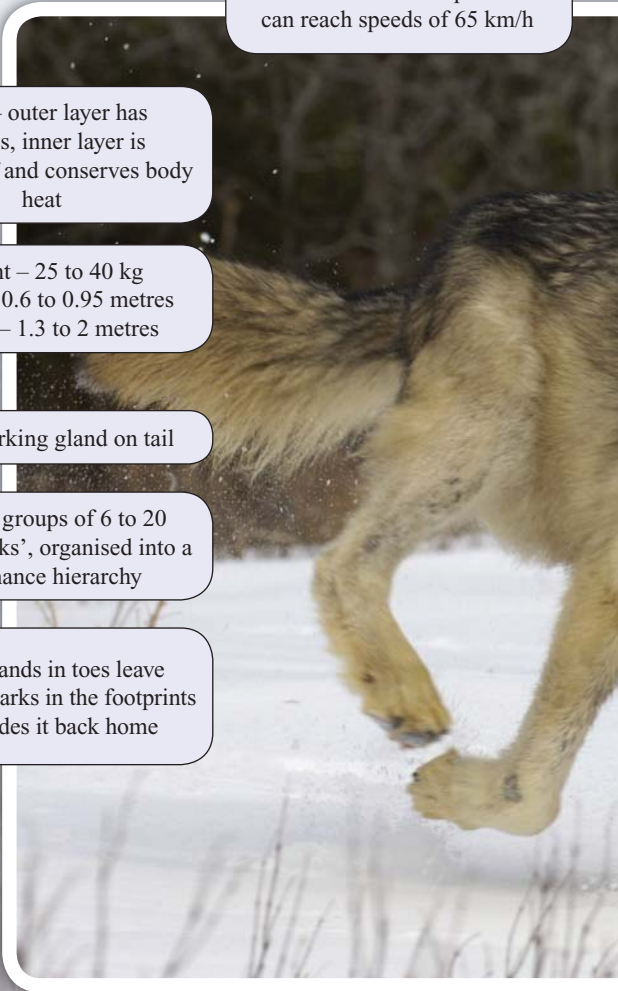
Coat – outer layer has bristles, inner layer is waterproof and conserves body heat

Weight – 25 to 40 kg  
Height – 0.6 to 0.95 metres  
Length – 1.3 to 2 metres

Scent marking gland on tail

Lives in groups of 6 to 20 called 'packs', organised into a dominance hierarchy

Scent glands in toes leave chemical marks in the footprints and guides it back home



### Wolf Distribution Map



Diet (North America)  
 Elk (48%)  
 Deer (23%)  
 Moose (11%)  
 Sheep (3%)

Large brain capacity

Acute hearing

Excellent sight

Keen sense of smell

Large sharp teeth –  
 very strong jaws

Fur colour – grey to grey-  
 brown, white, red, black and  
 brown

Paws and pads kept warm by  
 special blood vessels to cope with  
 harsh winter conditions



Little Red Riding Hood  
 (traditional children's story)

### Tail Positions



normal



attack  
 arousal



fear



tail wagging  
 in aggressive  
 arousal



intimidation  
 dominant  
 high position

### Postures and Behaviours



snapping attack



defensive threat



running in play



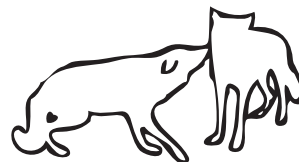
passive submission



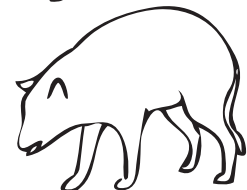
running in fear



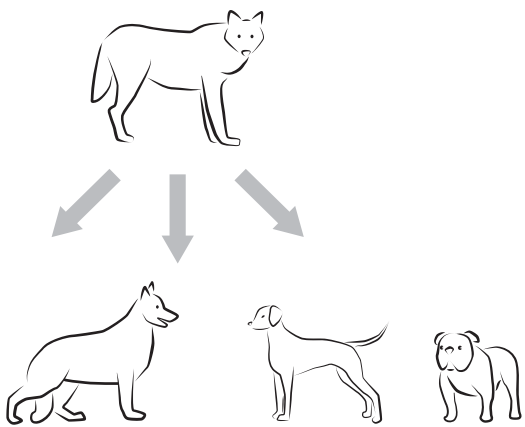
play bow



active submission



'ambivalent' display



The wolf is the ancestor of the modern dog

### Pack Dominance Hierarchy

Alpha Pair



Beta



Young Subordinates



Pups/Juveniles



Omega



Male ♂  
 Female ♀

ed

**WRITING TASK 2**

*To be answered in the answer book in pen, not pencil.  
You are advised to allocate 30 minutes to this task.*

Consider the statements below.

Based on **one** or **more** of the statements, develop a piece of writing presenting your point of view.

Your piece of writing will be judged on:

- the extent to which you develop your point of view in a reasonable and convincing way
- how effectively you express yourself.

Fashion is nothing more than doing what we're told to by people who want our money.

What is ignored by the fashion industry is the misery it causes to people who can't live up to its impossible standards.

We can all be stylish and beautiful if we are prepared to make the effort.

Sure, it's more important to be good than to be gorgeous, but given the choice, most people would take gorgeous every time.

## MULTIPLE-CHOICE QUESTIONS

*Answer this section in the GAT ANSWER BOOK.  
Mark your answers on the Multiple-Choice Answer Page.*

*You are advised to allocate 2 hours to this task.*

Choose the response that is **correct**, or that **best answers the question**, and shade the square on the answer page for multiple-choice questions according to the instructions on that page.

A correct answer is worth 1 mark, an incorrect answer is worth 0 marks. No marks will be given if more than one answer is shown for any question. Marks will **not** be deducted for incorrect answers.



## UNIT 1

## Question 1



- 1 The joke of the cartoon is that the speaker is
- A trying to be a good parent.
  - B disguising laziness as concern.
  - C more interested in educative theories than in his child.
  - D more interested in his child than in educative theories.

**UNIT 2****Questions 2 – 4**

Let  $n = \frac{d(d+1)}{2}$  where  $d$  is any positive integer (1, 2, 3 ...).

2 When  $d = 4$ ,  $n =$

- A 5
- B 10
- C 12
- D 20

3 When  $n = 21$ ,  $d =$

- A 4
- B 5
- C 6
- D 7

4 The difference between the values of  $n$  when  $d = 99$  and  $d = 100$  is

- A 45
- B 50
- C 99
- D 100

**UNIT 3****Question 5**

I don't want to belong to any club that will accept people like me as a member.

*Groucho Marx*

5 The speaker believes that

- A no club has low enough standards for him.
- B his standards are better than his character.
- C his character should not influence the standards of clubs.
- D clubs with low standards shouldn't accept him as a member.

## UNIT 4

### Questions 6 – 9

Famous author and linguist John Ronald Reuel Tolkien was born in South Africa in 1892. He joined the British Army during World War I and served in a highly decorated British unit. During the war, Tolkien witnessed the deaths of many of his fellow soldiers as well as some of his closest friends. He himself was struck down with trench fever and ended up in a hospital. It is often suggested that Tolkien's experience of war had a profound influence on his writing. He may well have come to view fantasy as a way to escape the harsh actuality of war, machines, guns and bombs. Certainly, it was during his recovery in a military hospital that he began to create fairy tales based upon his studies of mythology and folklore. After the war, Tolkien followed an academic career. His interest in languages led him to work on the New English Dictionary and inspired him to invent many artificial languages. Eventually, he went to Oxford University as Professor of Anglo-Saxon<sup>1</sup>, and later he became Professor of English Language and Literature.

Tolkien is probably best known as the author of *The Lord of the Rings*. It is said that he often invented fantasy stories to entertain his children. One of these stories was published in 1937 and was called *The Hobbit*. Although intended for children, *The Hobbit* attracted many adult readers and its great popularity led his publishers to persuade Tolkien to work on a sequel. In response, Tolkien created his most famous work, the epic three-volume novel, *The Lord of the Rings*. At first he thought his story would tell another children's tale but the work quickly grew darker and more serious in the writing. It took him ten years to complete the trilogy which has been popular since it first appeared in print. Although widely acclaimed as powerful and inventive, *The Lord of the Rings* has received censure. Some critics, particularly scholars of Norse mythology, consider the work highly derivative and taken extensively from myths and folklore. Despite this, Tolkien stories have appealed to generations of readers and influenced generations of writers. He well deserves to be considered the father of modern fantasy.

<sup>1</sup> *Anglo Saxon*: predecessor to the modern English language

6 According to the passage, Tolkien's experience in the army

- A led to a fascination with writing.
- B stimulated an interest in mythology.
- C led to a disenchantment with reality.
- D encouraged him to study language and literature.

7 According to the passage, *The Lord of the Rings*

- A was slow to gain popular acceptance.
- B changed in emphasis as it progressed.
- C represented a rejection of his earlier writing style.
- D was a unique and unprecedented piece of writing.



- 8 The writer of the passage suggests that Tolkien's fame rests upon his
- A academic career.
  - B children's stories.
  - C humorous characters.
  - D skill as a writer of fiction.
- 9 According to the passage, Tolkien 'deserves to be considered the father of modern fantasy' (lines 26 and 27) in the sense that
- A his novels are enjoyed by children.
  - B he invented the idea of fantasy in literature.
  - C he wrote fiction which appealed to both adults and children.
  - D his novels have shaped the way in which people view fantasy stories.

## UNIT 5

### Questions 10 – 12

*The following are four different translations (A–D) of a haiku poem by the Japanese poet Basho.*

- A Along this road  
goes no one;  
this autumn evening.
- B Not one traveller  
braves this road –  
autumn night.
- C By lonely roads  
this lonely poet marches  
into autumn dusk.
- D All along this road  
not a single soul – only  
autumn evening comes.

- 10 Which of the translations gives the most emotional interpretation?

A            B            C            D

- 11 Which of the translations seems to make autumn a presence?

A            B            C            D

- 12 Which of the translations contrasts most with the others?

A            B            C            D

## UNIT 6

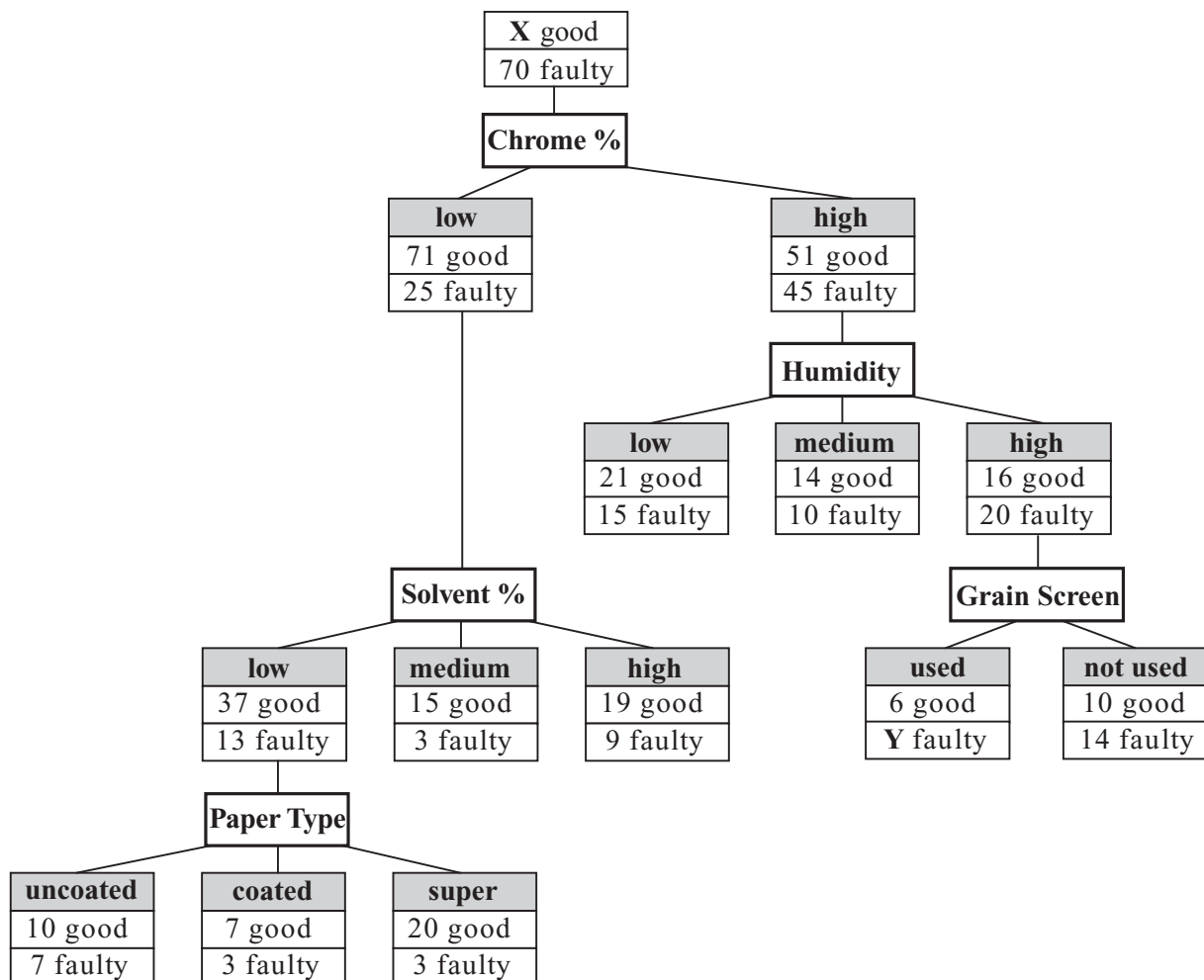
### Questions 13 – 16

The diagram shows the incidence of a particular fault during a number of print runs by a printing firm using a new machine. **X** runs were good and did not show the fault, and 70 runs did show the fault. During the print runs, the effect of five factors on the occurrence of the fault was observed. The factors were:

- Chrome % – the percentage of chrome in a solution used to maintain the printing cylinders;
- the humidity in the printing room;
- Solvent % – the percentage of solvent in the ink mixture;
- whether a process known as grain screening was used or not; and
- the type of paper used.

For the following, assume that Humidity level only has an effect when Chrome % is high, Grain Screen only has an effect when Humidity is high, Solvent % only has an effect when Chrome % is low, and Paper Type only has an effect when Solvent % is low. Other situations were not tried and observed.

Two values, denoted **X** and **Y**, are missing.



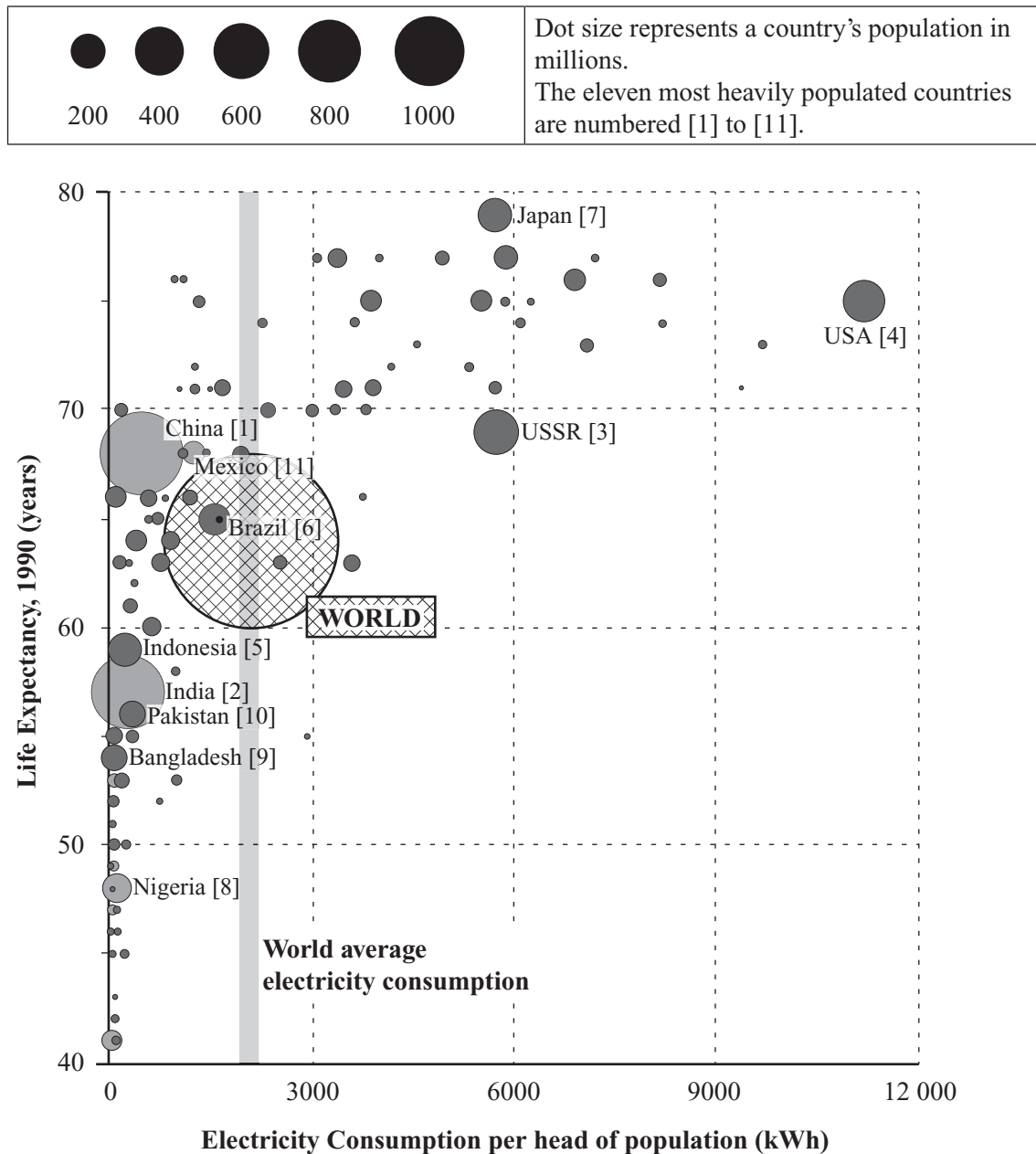
- 13 What is the value of **X**?
- A 297
  - B 219
  - C 122
  - D 25
- 14 What is the value of **Y** (under Grain Screen)?
- A 4
  - B 6
  - C 10
  - D This value cannot be determined.
- 15 If in future print runs the Chrome % is low, the fault will most likely occur when the Solvent % is
- A high.
  - B medium.
  - C low and the Paper Type is super.
  - D low and the Paper Type is uncoated.
- 16 Under which of the following conditions was the fault most likely to occur?
- A Chrome % low; Solvent % high
  - B Chrome % low; Solvent % low; Paper Type uncoated
  - C Chrome % high; Humidity low
  - D Chrome % high; Humidity high; Grain Screen not used

UNIT 7

Questions 17 – 19

Figure 1 below shows

- average life expectancy in a number of countries in 1990
- electricity consumption per head of population in each of these countries.



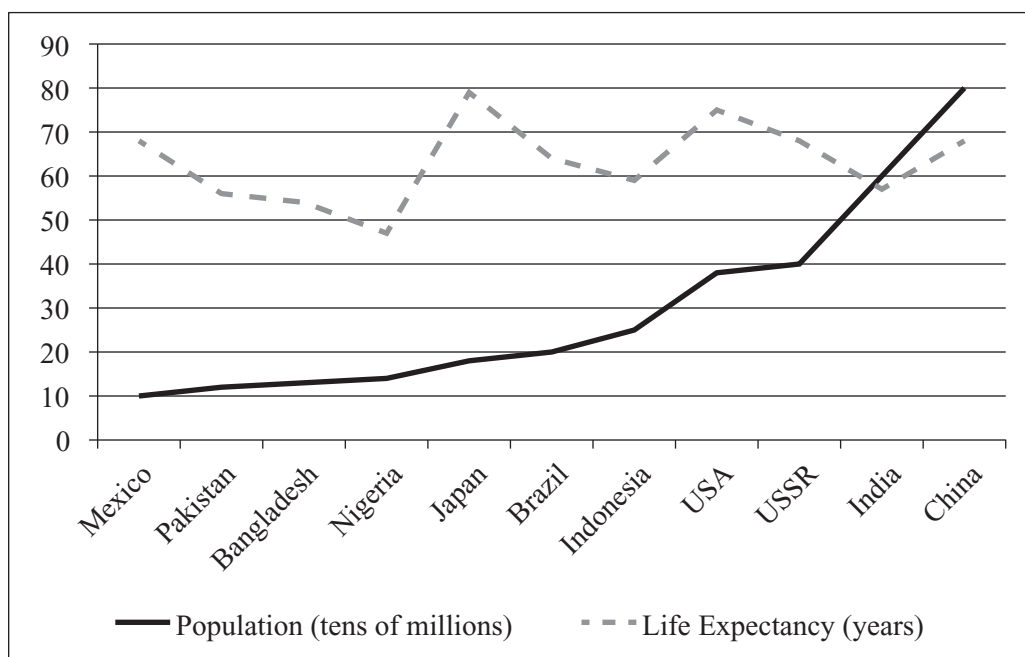
Note: 'USSR' refers to the Union of Soviet Socialist Republics, founded in 1924 and dissolved in 1991. Its principal member was Russia.

17 In 1990 average life expectancy in the world as a whole was about

- A 58 years.
- B 60 years.
- C 64 years.
- D 68 years.

In each of questions 18 and 19 below, you are asked to evaluate evidence *for* and *against* a particular statement.

18 The following chart is based on Figure 1 and compares life expectancy with population for each of the 11 countries.



Statement:

The bigger the population, the lower the life expectancy.

The chart provides

- A strong evidence **in favour of** the statement.
- B some evidence **in favour of** the statement.
- C strong evidence **against** the statement.
- D little evidence **either** in favour of the statement or against it.

19 Statement:

If a country's electricity consumption is below the world average then life expectancy in that country is below the world average.

Figure 1 provides

- A strong evidence **in favour of** the statement.
- B some evidence **in favour of** the statement.
- C strong evidence **against** the statement.
- D little evidence **either** in favour of the statement or against it.



## UNIT 8

### Questions 20 – 23

David wants to improve a cream that is applied to insect bites. He tests the following recipes, which vary the ingredients, comparing them to the Standard Recipe. The Standard Recipe reduces pain but not swelling caused by insect bites.

Recipes	Ingredients (quantities in teaspoons)							Results	
	Olive butter	Neem seed oil	Beeswax	Lanolin	Herbal extract 1	Herbal extract 2	Oil base	Property	Effectiveness
<b>Standard</b>	4	2	0.5	–	–	–	3.5		
<b>I</b>	4	2	0.5	1	–	–	2.5	More glossy	
<b>II</b>	4	–	0.5	1	–	–	4.5	More glossy	Fails to reduce pain
<b>III</b>	4	2	–	–	1	1	2	More aromatic	Reduces swelling
<b>IV</b>	8	–	0.5	1	–	–	0.5	More glossy Easier to apply	Fails to reduce pain
<b>V</b>	4	2	0.5	–	1	1	1.5	More aromatic	Reduces swelling
<b>VI</b>	4	2	0.5	1	–	1	1.5	More glossy	Reduces swelling

Assume that:

- The oil base has no effect and does not alter the properties or effectiveness of the cream in any way. It is only added to ensure that the total volume in each recipe is 10 teaspoons.
- If no comment is made about property or effectiveness, it is the same as the Standard Recipe.
- Each ingredient has, at most, just one effect, and the ingredients do not interact.

**20** Which of the following most likely causes the insect cream to be more glossy?

- A** the addition of lanolin
- B** the removal of beeswax
- C** the removal of neem seed oil
- D** the addition of herbal extract 2

21 Which of the following ingredients most likely reduces the swelling of insect bites?

- A lanolin
- B neem seed oil
- C herbal extract 1
- D herbal extract 2

22 Suppose David tests a new recipe given below.

Olive butter	Neem seed oil	Beeswax	Lanolin	Herbal extract 1	Herbal extract 2	Oil base
4	2	0.5	1	1	1	0.5

Compared to Recipe **IV**, of the following, the insect cream produced by the new recipe is most likely to be

- A more glossy but less aromatic.
- B less aromatic and more difficult to apply.
- C more difficult to apply and more effective at reducing pain.
- D more effective at reducing pain but less effective in reducing swelling.

23 Of the following, what is the most likely function of the neem seed oil?

- A to reduce pain from insect bites
- B to reduce swelling from insect bites
- C to make the insect cream more aromatic
- D to make the insect cream more glossy

## UNIT 9

## Questions 24 – 27

The following passage is from a novel about an Australian writer, Elizabeth Costello. It is written from the point of view of her adult son, who accompanies her as she gives an interview.

Her strategy with interviewers is to take control of the exchange, presenting them with blocks of dialogue that have been rehearsed so often he wonders they have not solidified in her mind and become some kind of truth. A long paragraph on childhood in the suburbs of Melbourne (cockatoos screeching at the bottom of the garden) with a sub-paragraph on the danger to the imagination of middle-class security. A paragraph on the death of her father of enteric fever in Malaya, with her mother somewhere in the background playing Chopin waltzes on the piano, followed by a sequence of what sound like impromptu ruminations on the influence of music on her own prose. A paragraph about her adolescent reading (voracious<sup>1</sup>, unselective), then a jump to Virginia Woolf<sup>2</sup>, whom she first read as a student, and the impact Woolf had on her. A passage on her spell at art school, another on her year and a half at post-war Cambridge ('What I mainly remember is the struggle to keep warm'), another on her years in London ('I could have made a living as a translator, I suppose, but my best language was German, and German wasn't popular in those days, as you can imagine'). Her first novel, which she modestly disparages, though as a first novel it stood head and shoulders above the competition, then her years in France ('heady times'), with an oblique glance at her first marriage. Then her return to Australia with her young son. Him.

All in all, he judges, listening in, a workmanlike performance, if one can still use that word, eating up most of the hour, as intended, leaving only a few minutes to skirt the questions that begin 'What do you think ...?' What does she think about neoliberalism<sup>3</sup>, the woman question, Aboriginal rights, the Australian novel today? He has lived around her for nearly four decades, on and off, and is still not sure what she thinks about the big questions. Not sure and, on the whole, thankful not to have to hear. For her thoughts would be, he suspects, as uninteresting as most people's. A writer, not a thinker. Writers and thinkers: chalk and cheese. No, not chalk and cheese: fish and fowl. But which is she, the fish or the fowl? Which is her medium: water or air?

<sup>1</sup> *voracious*: keen, greedy

<sup>2</sup> *Virginia Woolf*: influential British writer, 1882–1941

<sup>3</sup> *neoliberalism*: a political and economic ideology

24 Elizabeth Costello's son portrays his mother's responses as

- A flamboyant and original.
- B confused and unintelligible.
- C painfully honest and perceptive.
- D somewhat trite and carefully constructed.

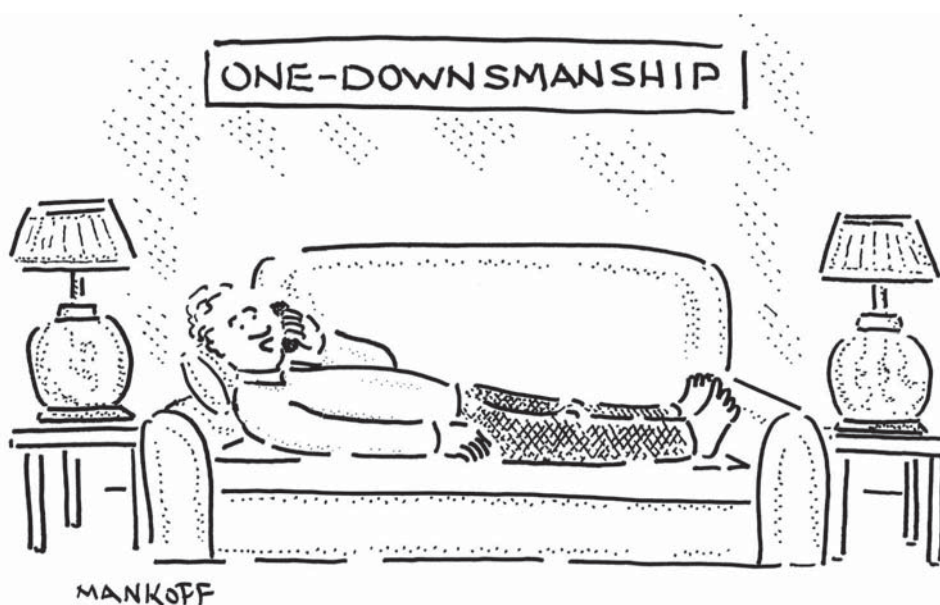
25 Lines 17 and 18 highlight the son's

- A centrality in his mother's life.
- B relative unimportance in his mother's life.
- C lack of interest about his role in his mother's life.
- D eagerness to understand what role he plays in his mother's life.

- 26 At the end of the passage, the narrator makes the assumption that writers are
- A more intellectual than they appear.
  - B less intellectual than most other people.
  - C more intellectual than most other people.
  - D less intellectual than they wish to appear.
- 27 The passage suggests that Elizabeth Costello's son regards his mother with
- A detachment.
  - B admiration.
  - C contempt.
  - D indifference.

## UNIT 10

### Question 28



*"You're depressed? My depression makes your depression look like euphoria<sup>1</sup>."*

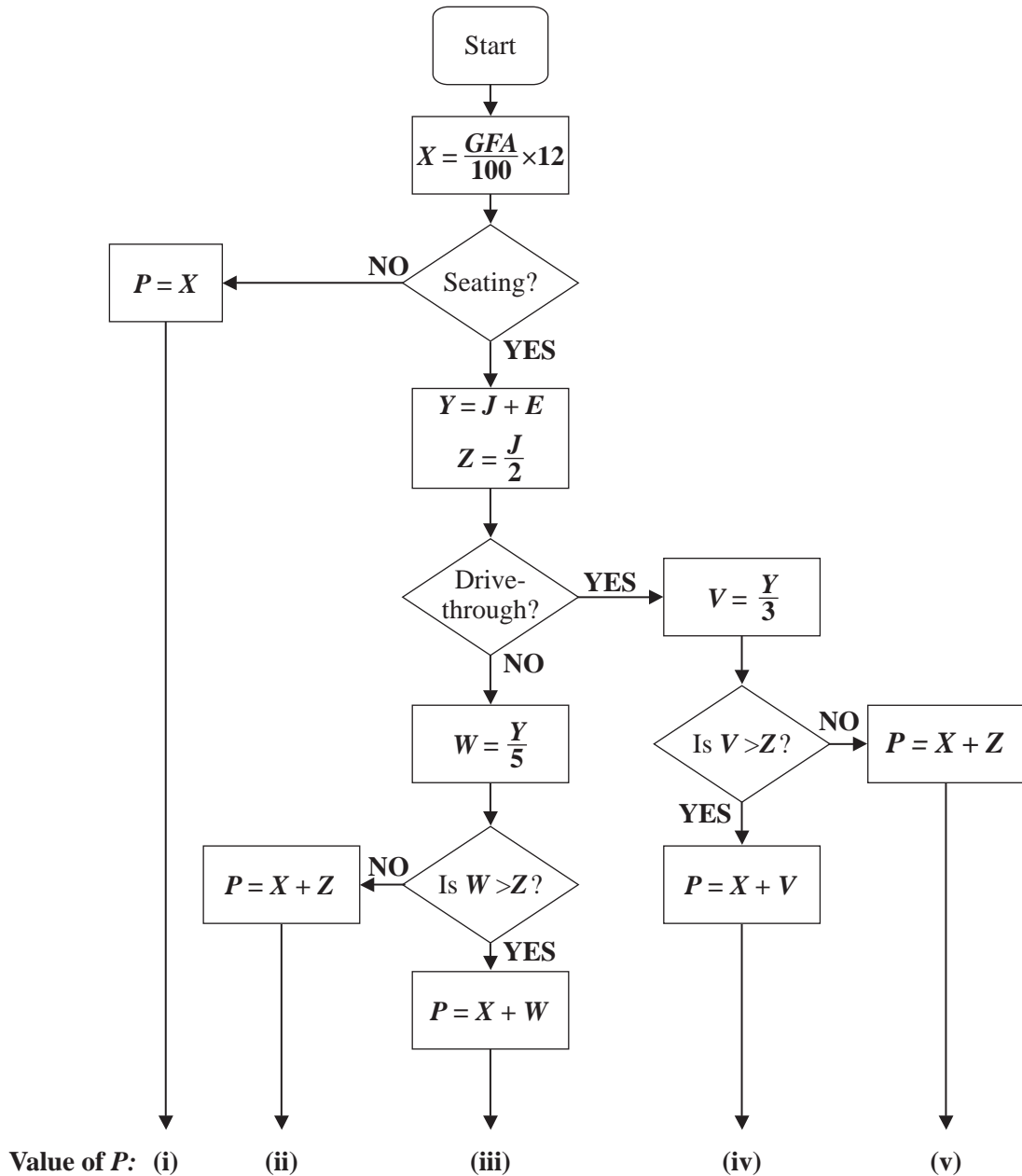
<sup>1</sup> *euphoria*: feeling of elation and well-being

- 28 The cartoon makes a joke about
- A burn-out.
  - B competition.
  - C depression.
  - D technology.

UNIT 11

Questions 29 – 33

Jane, who works at the city council, has made a flow chart for a computer program to help determine the number of car parking spaces ( $P$ ) required for different types of takeaway outlet. The number of spaces required for an outlet depends on the number of indoor seats ( $J$ ) and the number of outdoor seats ( $E$ ), as well as the gross floor area ( $GFA$ , in  $m^2$ ). To help her calculate  $P$ , she has introduced the intermediate variables  $V$ ,  $W$ ,  $X$ ,  $Y$  and  $Z$ .





29 Which of the following best describes the facilities at a takeaway outlet described by path (ii) in the flow chart?

- A seating with no drive-through
- B seating with a drive-through
- C no seating and a drive-through
- D no seating, no drive-through

30 Which of the following is equal to  $V$ ?

- A one-third of the number of indoor seats
- B one-half of the number of indoor seats
- C one-third of the total number of indoor and outdoor seats
- D one-fifth of the total number of indoor and outdoor seats

31 A takeaway outlet has 30 indoor seats and 20 outdoor seats but no drive-through.

Which of the following gives  $W$  and  $Z$ ?

	$W$	$Z$
A	6	10
B	10	10
C	6	15
D	10	15

32 A takeaway outlet with a  $GFA$  of 100 m<sup>2</sup> has 20 indoor seats and 10 outdoor seats but no drive-through.

What is  $P$ ?

- A 32
- B 28
- C 22
- D 18

33 Which of the following is true when  $W$  is equal to  $Z$ ?

- A  $3J = 2E$
- B  $3E = 2J$
- C  $J = 3E$
- D  $E = 3J$

## UNIT 12

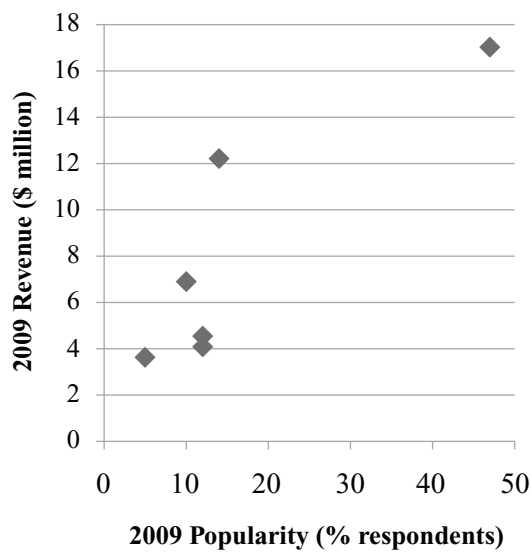
### Questions 34 – 37

A survey of mobile phone ownership was conducted in a city between 2005 and 2009. The table shows the percentage of respondents that owned various brands of mobile phone (popularity). Respondents may own more than one mobile phone.

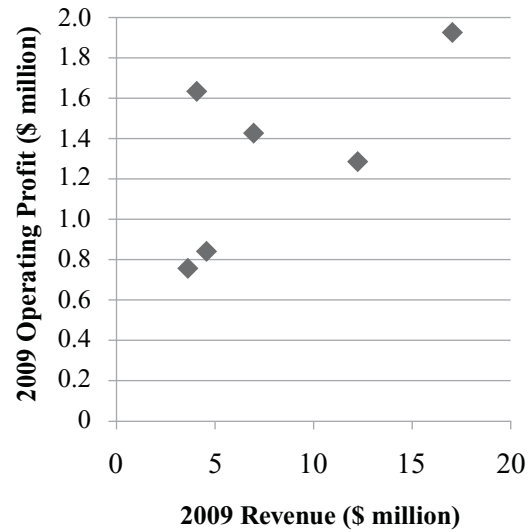
**Mobile phone ownership by brand (% of respondents)**

	Brand 1	Brand 2	Brand 3	Brand 4	Brand 5	Other brands
<b>2005</b>	59	10	18	7	6	9
<b>2006</b>	52	12	33	8	9	10
<b>2007</b>	47	16	31	9	10	8
<b>2008</b>	47	12	12	13	9	7
<b>2009</b>	47	5	12	14	10	12

Figure 1 shows the revenue (gross income) and popularity in 2009 of each brand of phone. Figure 2 shows the operating profit and revenue in 2009 of each brand of phone.



**Figure 1**



**Figure 2**

The % operating margin is given by:

$$\% \text{ operating margin} = \frac{\text{operating profit}}{\text{revenue}} \times 100$$

**34** Which of the following is the best estimate of Brand 1 revenue in 2009?

- A \$4 million
- B \$7 million
- C \$12 million
- D \$17 million

- 35 Of the following, over the five years, the mean (average) popularity of Brand 2 is closest to that of
- A Brand 3.
  - B Brand 4.
  - C Brand 5.
  - D Other brands.
- 36 For Brand 4, which of the following is the best estimate of the 2009 operating profit?
- A \$0.75 million
  - B \$1.30 million
  - C \$1.60 million
  - D \$1.90 million
- 37 For Brand 2 in 2009, which of the following is the best estimate for the % operating margin?
- A 10%
  - B 15%
  - C 20%
  - D 40%

## UNIT 13

## Questions 38 – 41

The passage below is taken from a novel. In it the narrator, an historian, describes the famous film director, Dr Jurgen Lind.

He (Dr Lind) was modest, reticent, dressed like a workman, and was soft of speech. He always hung back at doors, cared nothing for the little ceremonials of daily life and conferred with his chief colleagues about every detail. But it was clear that he expected and got his own way, once he determined what it was.

Moreover, he seemed to me to be formidably intelligent. His long sad, unsmiling face, with its hanging underlip that showed long, yellow teeth, the tragedy line of his eyelids, which began high on the bridge of his nose and swept miserably downward toward his cheeks, and the soft bereaved tone of his voice, suggested a man who had seen too much to be amused by life; his great height – he was a little over six feet eight inches<sup>1</sup> – gave him the air of a giant mingling with lesser creatures about whom he knows some unhappy secret which was concealed from themselves; he spoke slowly in an elegant English only slightly marked by that upper-class Swedish accent which suggests a man delicately sucking a lemon. He had been extensively educated – his junior assistants all were careful to speak to him as Dr. Lind – and he had as well that theatre artist's quality of seeming to know a great deal, without any visible study or effort, about whatever was necessary for his immediate work. He did not know much about the politics and economics of the reign of Louis Philippe<sup>2</sup> as I did, for after all I had given my life to the study of history but he seemed to know a great deal about its music, the way its clothes ought to be worn, the demeanour of its people, and its quality of life and spirits which belonged to a sensibility far beyond mine. When historians meet with this kind of informed, imaginative sympathy with a past era in a non-historian, they are awed. How on earth does he know that, they are forced to ask themselves and why did I never tumble to that? It takes a while to discover that the knowledge, though impressive and useful, has its limitations, and when the glow of imaginative creation no longer suffuses it, it is not really deeply grounded.

<sup>1</sup> *six feet eight inches*: a little over two metres

<sup>2</sup> *Louis Philippe*: King of the French from 1830 to 1848

- 38 Which of the following best describes the narrator's attitude to Dr Lind?
- A impressed yet critical
  - B admiring and envious
  - C captivated but bewildered
  - D unenthusiastic and exasperated
- 39 The statement 'a man delicately sucking a lemon' (line 13) suggests that Dr Lind's accent is
- A harsh.
  - B clipped.
  - C strident.
  - D melodious.

- 40 The description of Dr Lind suggests something of the narrator's own
- |   |             |   |              |
|---|-------------|---|--------------|
| A | insecurity. | C | gullibility. |
| B | hypocrisy.  | D | compassion.  |
- 41 The passage suggests that the narrator is
- |   |             |   |              |
|---|-------------|---|--------------|
| A | irrational. | C | insensitive. |
| B | perceptive. | D | sentimental. |

## UNIT 14

### Questions 42 – 44

A shop has a number of toy rabbits. Each rabbit is coloured either white or brown or black, and has ears that are either floppy or upright.

- I There are more brown rabbits than black rabbits.
  - II Of the brown rabbits, half have floppy ears.
  - III In total, three rabbits have floppy ears.
  - IV There are twice as many brown rabbits with floppy ears as white rabbits with floppy ears.
  - V There are three times as many black rabbits as white rabbits.
- 42 How many brown rabbits are there in the shop?
- A two
  - B four
  - C six
  - D There is insufficient information to determine this.
- 43 How many rabbits are there in the shop?
- A eight
  - B seven
  - C six
  - D There is insufficient information to determine this.
- 44 How many black rabbits with upright ears are there in the shop?
- A two
  - B three
  - C four
  - D There is insufficient information to determine this.



## UNIT 15

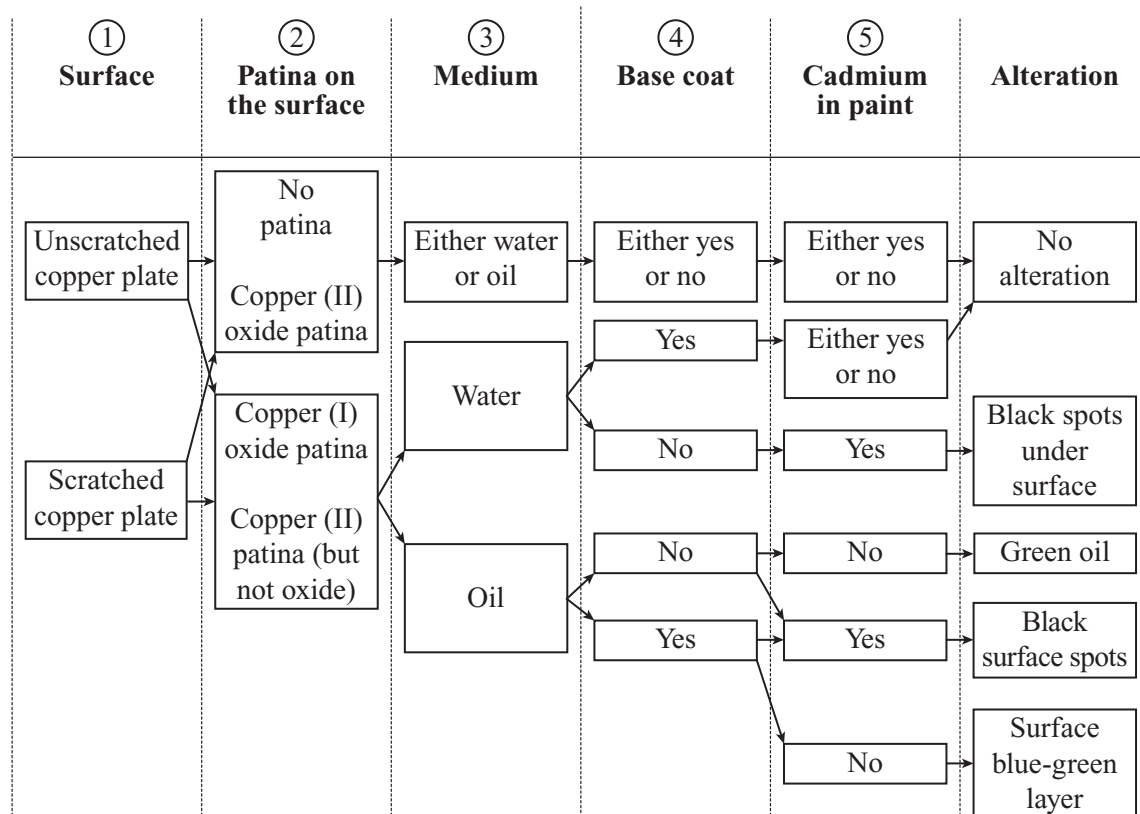
### Questions 45 – 48

Artists use paints composed of pigments mixed with a medium containing either water or oil. The medium helps the pigment to stick to a surface. The pigment may contain cadmium and the painting surface may be *primed*, that is, have a base coat applied to it.

For one of his paintings, Spanish artist Joan Miró painted directly onto copper plate. Later, black surface spots (one type of *alteration*) were visible only on the areas painted with yellow and red paints.

To determine what caused the formation of these spots, several trials were set up using the materials Miró may have used, but in which the conditions ( ① to ⑤ ) were varied as shown in the chart.

*Note:* Copper corrodes when it is exposed to the atmosphere and can form a copper *patina* on the surface, which is generally composed of copper (I) oxide, copper (II) oxide or various other copper (II) compounds.



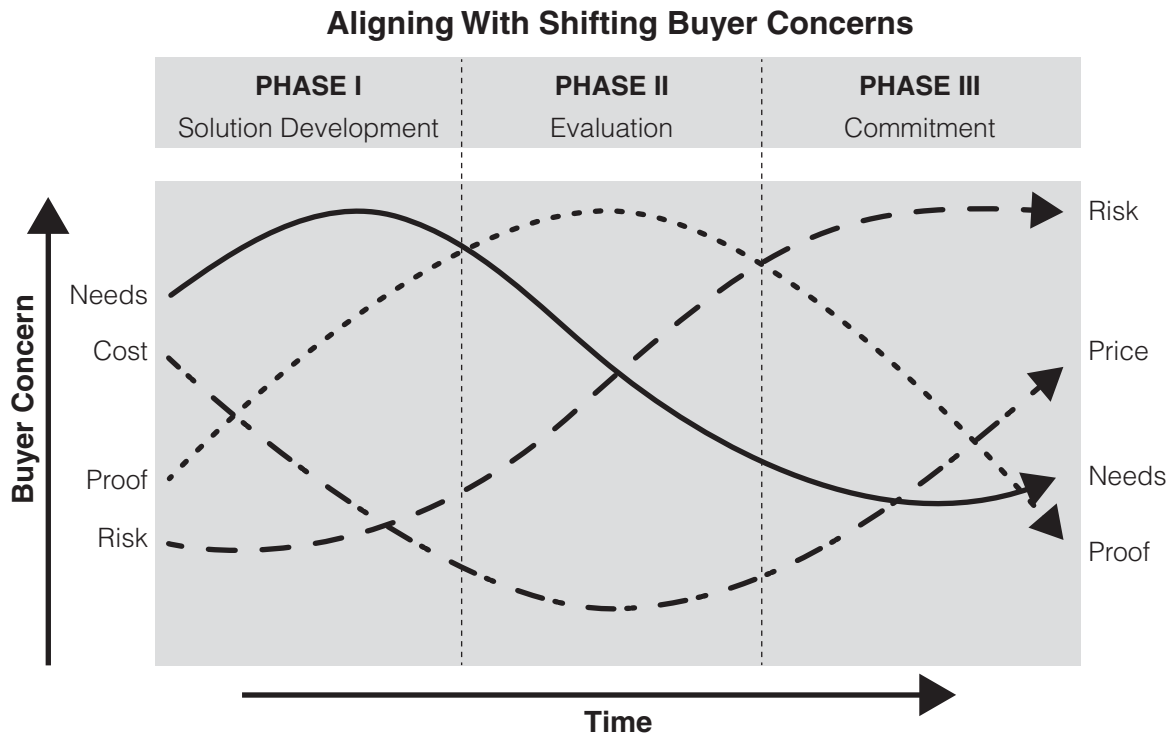
Answer questions 45–48 according to the chart.

- 45 Which of the following is necessary to produce a green oil alteration?
- A a scratched copper plate
  - B an unscratched copper plate
  - C water as the medium
  - D oil as the medium
- 46 When painting onto copper plate, it is most likely that there will be no alterations to the artwork if
- A there is no patina.
  - B a base coat is used.
  - C there are no scratches.
  - D the medium contains oil.
- 47 Which of the following **must** Miró have used in his painting?
- A oil in the medium and an unscratched copper plate
  - B water in the medium and a scratched copper plate
  - C oil in the medium and red and yellow paints containing cadmium
  - D water in the medium and red and yellow paints containing cadmium
- 48 Miró's painting would **not** have formed black surface spots if the copper plate
- A had a base coat.
  - B was unscratched.
  - C had a copper (I) oxide patina.
  - D had a copper (II) oxide patina.

## UNIT 16

### Questions 49 – 51

The diagram below depicts the process of selling new technology to business. The process comprises three phases. In each phase, a different buyer concern is highlighted in importance.



**Phase I** is the Solution Development phase. During Solution Development, determining needs is most important. If needs aren't aligned with a solution, then the cost of the solution really isn't relevant unless the solution is so inexpensive that it is risk-free to the buyer ... an unlikely scenario in technology solutions!

**Phase II** is the Evaluation phase. A client's needs have been determined and now the client will evaluate the technology for 'fit' within the business, and seek proof that the solution is correct. This proof will be addressed in three typical buyer areas:

- User Buyer fit (how the solution will be used);
- Technical Buyer fit (how the solution would integrate into technology), and
- Economic Buyer fit (how the solution will address the economic needs of the business).

Note that this last area, Economic Buyer fit, ISN'T about price; it is about how the solution will address the economic goals of the company. In Phase II, proof that the solution is relevant becomes the most important buying criterion.

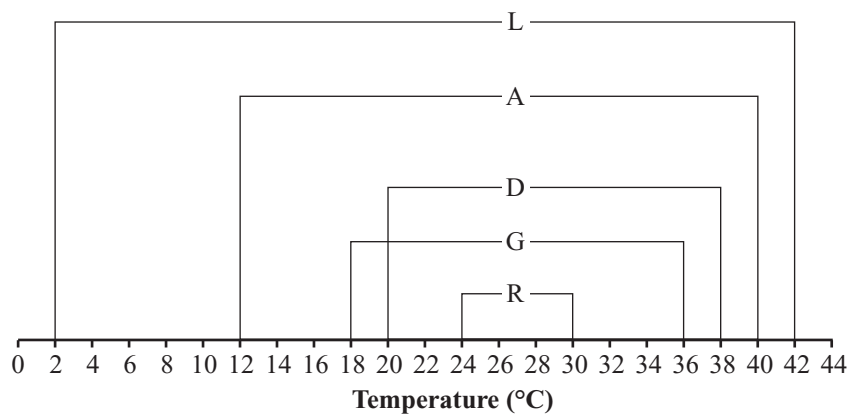
**Phase III** is the Commitment phase. If you progress to this phase, the solution has been determined to add value to the business if planned and deployed correctly. This means Risk becomes the overarching primary buyer concern, not price (secondary) as most salespeople think.

- 49 In Phase I, the buyer's concerns about Risk are low because
- A the buyer hasn't agreed to buy anything yet.
  - B the seller has already guaranteed a fixed product price.
  - C the buyer doesn't believe there is a solution to their problem.
  - D the seller hasn't discovered a problem with the buyer's current technology.
- 50 Which one of the following is a plausible description of a buyer's concern in Phase II?
- A They set aside issues of cost to focus on the product meeting their requirements.
  - B They recognise that buying the most expensive product will guarantee the greatest profit.
  - C They know that since they have not committed to any particular product, they can test multiple products.
  - D They accept that it would be more profitable to buy a cheaper product, even if the risk of it not working is greater.
- 51 Which of the following best explains why buyers are less concerned about Price than they are about Risk in Phase III?
- A Buyers know that the product has been bought and the money cannot be refunded.
  - B The seller has convinced them that price is irrelevant and that their only concern is their reputation.
  - C Buyers stand to lose far more than the cost of the technology if the technology does not solve their problems.
  - D The risk that sellers will not deliver their product as promised is higher than the risk of them raising the agreed price.

## UNIT 17

### Questions 52 and 53

The figure indicates the temperature limits within which certain processes in a plant can occur. The processes are reproduction (R), growth (G), development (D), normal metabolic activity (A) and other basic life processes (L).



- 52 A farmer notices that a crop in a temperature-controlled greenhouse grows but does not develop.

This is most likely to occur if the temperature in the greenhouse is

- A 17°C.
  - B 19°C.
  - C 35°C.
  - D 37°C.
- 53 Which of the following statements corresponds to information presented in the figure?
- A Growth cannot occur without development.
  - B Development cannot occur without growth.
  - C Above 30°C it is possible for growth to occur without development.
  - D Above 30°C it is possible for development to occur without growth.



**UNIT 18****Questions 54 – 56**

In the past when retailers bought goods from a manufacturer, they had to pay the manufacturer's price (the wholesale price), plus a tax to the government called the wholesale sales tax (WST). This tax was calculated as a percentage of the wholesale price and the government could vary this percentage.

More recently, the WST was replaced by a tax called the GST. The GST is applied at a fixed rate of 10% of the wholesale price.

- 54** A manufacturer sold a camera to a retailer for \$800. The wholesale sales tax on cameras was 40%.

Including tax, the amount that the retailer paid for the camera was

- A** \$1200.
- B** \$1120.
- C** \$980.
- D** \$840.

- 55** A retailer pays a manufacturer \$1000 for a television, which includes a 30% wholesale sales tax.

Excluding tax, which of the following is the best estimate of the amount that the manufacturer charged for the television?

- A** \$1300
- B** \$970
- C** \$770
- D** \$700

- 56** Due only to the change in tax rate, the amount that a retailer pays for a stereo system decreases by \$200 when the government changes from a WST of 30% to a GST of 10%.

Including tax, how much does the retailer pay after the tax change?

- A** \$980
- B** \$1100
- C** \$1200
- D** The amount cannot be determined.

## UNIT 19

### Questions 57 – 59

*The following passage is about parkour and freerunning.*

Parkour or *l'art du déplacement* ('the art of movement' in English) is a discipline that appeared first in France. The term parkour comes from *parcours du combattant*, the classic obstacle course method used in military training. More like a martial art than a sport, but more like a craft than an art, parkour focuses on moving from one point to another as smoothly, efficiently and quickly as possible. Freerunning, on the other hand, is a form of urban acrobatics in which participants, known as freerunners, use the city and rural landscape to perform movements through its structures. It incorporates efficient movements from parkour, adds aesthetic vaults and other acrobatics, such as tricking and street stunts, creating an athletic and aesthetically pleasing way of moving. It is commonly practised at gymnasiums and in urban areas that are cluttered with obstacles.

The aim of parkour practitioners is to improve their ability to overcome obstacles faster and in the most efficient manner, while freerunners practice and employ a broader array of movements that are not always necessary in order to overcome obstacles.

David Belle, a founder of parkour, distinguished between parkour and freerunning in the following terms:

Understand that this art has been created by a few soldiers in Vietnam to escape or reach: and this is the spirit I'd like parkour to keep. You have to make the difference between what is useful and what is not in emergency situations. Then you'll know what is parkour and what is not. So if you do acrobatic things on the street with no other goal other than showing off, please don't say it's parkour. Acrobatics existed a long time ago before parkour.

The freerunner, Jerome Ben Aoues, commented that in freerunning:

The most important element is the harmony between you and the obstacle; the movement has to be elegant ... If you manage to pass over the fence elegantly – that's beautiful, rather than saying I jumped the lot. What's the point in that?

On the other hand, some have argued that there is no real difference between parkour and freerunning because it is all about individuals finding a way of expressing themselves.

**57** Freerunning is best described as

- |                   |                         |
|-------------------|-------------------------|
| <b>A</b> an art.  | <b>C</b> a discipline.  |
| <b>B</b> a craft. | <b>D</b> a performance. |

**58** David Belle suggests that parkour is

- A** a sport rather than a game.
- B** a game rather than a sport.
- C** practical rather than aesthetic.
- D** aesthetic rather than practical.



## UNIT 21

### Questions 64 – 66

The figures show cross sections of a hand operated water pump used to empty water from a fish tank into a bucket. The pump is operated by a handle, which is moved in and out in the main chamber. The handle is connected to a moveable disk (VI), which has a rubber seal around its outer edge to stop water passing around it. Another disk (V), through which the handle moves without leakage, is fixed in place in the main chamber. The main chamber is divided into three sections (W, X and Y). Stops limit the movement of disk VI to within Section X. The figures indicate the operation of four flapper valves (I, II, III and IV) and the flow of water through the pump and during successive in (Figure 1) and out (Figure 2) movements of the handle.

The figures indicate the operation of four flapper valves (I, II, III and IV) and the flow of water through the pump and during successive in (Figure 1) and out (Figure 2) movements of the handle.

- Each flapper valve only opens in one direction, as indicated in the diagram.
- The pipe from the fish tank and the pipe to the bucket are closed at their ends near V.

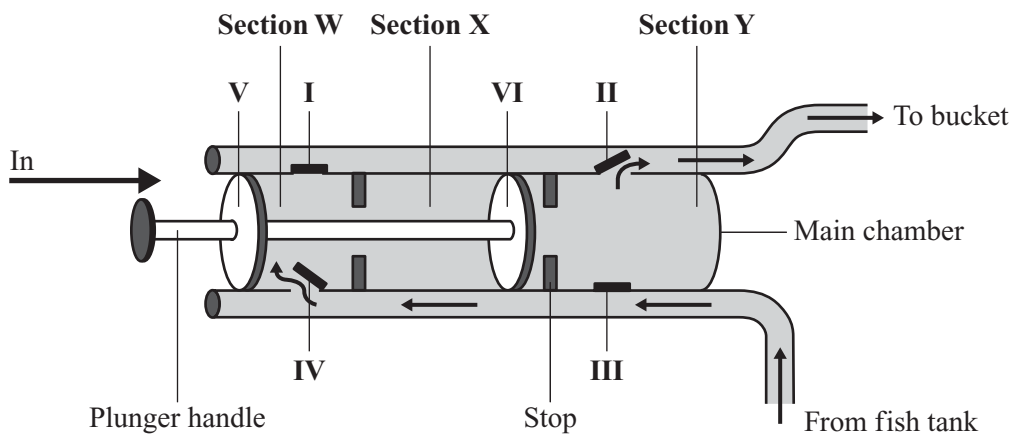


Figure 1

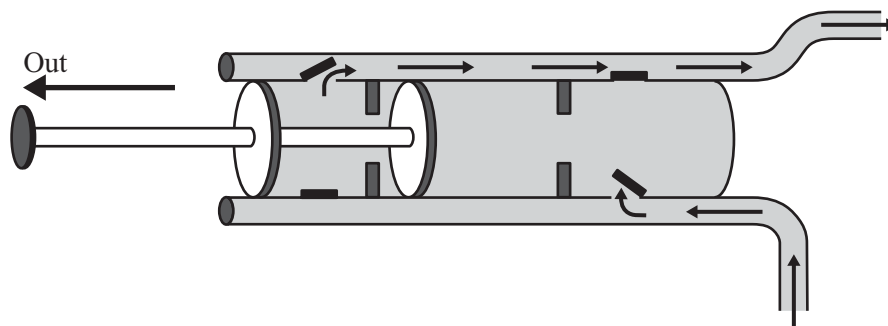


Figure 2

- 64 Which of the following statements best describes the movement of water through the pump?

As water enters the main chamber through flapper valve

- A I, water exits through flapper valve II.
- B II, water exits through flapper valve IV.
- C III, water exits through flapper valve I.
- D IV, water exits through flapper valve III.

- 65 Water entering **Section W** of the pump must pass through

- A **Section Y** only.
- B flapper valve **IV** only.
- C both flapper valves **III** and **IV**.
- D both **Section Y** and flapper valve **IV**.

- 66 Which of the following modifications would best allow the pump to move water from the bucket back into the fish tank?

- A reposition flapper valves **I** and **II** so that each opens in the opposite direction
- B reposition flapper valves **III** and **IV** so that each opens in the opposite direction
- C reposition flapper valves **I**, **II**, **III** and **IV** so that each opens in the opposite direction
- D None of the above modifications will enable this pump to move water into the fish tank.

## UNIT 22

## Questions 67 – 70

*The image of the Australian outback on the next page was painted by Russell Drysdale.*

Pamela Bell described the painting in the following terms:

*Man Reading a Paper* is one of the most surreal of Drysdale's paintings of the early 1940s. For the first time, Drysdale incorporated pieces of corrugated iron and a windmill, motifs which at times appear abstract. A sense of ambiguity is heightened by the suggestion of actions taking place in an internal rather than external environment. Instead of sitting in a lounge chair reading a paper, the male figure rests on a tree stump, with his jacket hung on the nearest branch. The subject's indifference to the strange scene around him only heightens the viewer's feeling of unease.

5

67 Bell sees the painting as

- A eerie.
- B tragic.
- C tranquil.
- D celebratory.

68 The seated figure in the painting seems

- A at home in the landscape.
- B a victim of the landscape.
- C alienated from the landscape.
- D the destroyer of the landscape.

69 The painting is best described as

- A tragic.
- B passionate.
- C celebratory.
- D dispassionate.

70 Drysdale's attitude to the Australian outback seems to be

- A hostile.
- B scornful.
- C celebratory.
- D unsentimental.



*Man Reading a Paper*

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(<http://www.geni.org/globalenergy/library/geni/simulation/lifeexpectancy-vs-electricity.shtml>);

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