

Victorian Certificate of Education 2020

General Achievement Test

Wednesday 9 September 2020

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>
Writing Task 1	1	30
Writing Task 2	1	30
Multiple-choice questions	70	120

- 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 correction fluid/tape.
- No calculator is allowed in this test.

Materials supplied

- Question book of 44 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** on the answer book.
- Write your **name** on the multiple-choice answer page on page 15 of the answer book.
- Follow the times suggested for each task.
- 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.

WRITING TASK 1

*To be answered in the answer book.
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
- how clearly you express yourself.

'If I were asked to condense the whole of the present century into one mental picture, I would pick ... a person in a motor car, driving along a concrete highway.'

JG Ballard, 1971



Melbourne, 1856

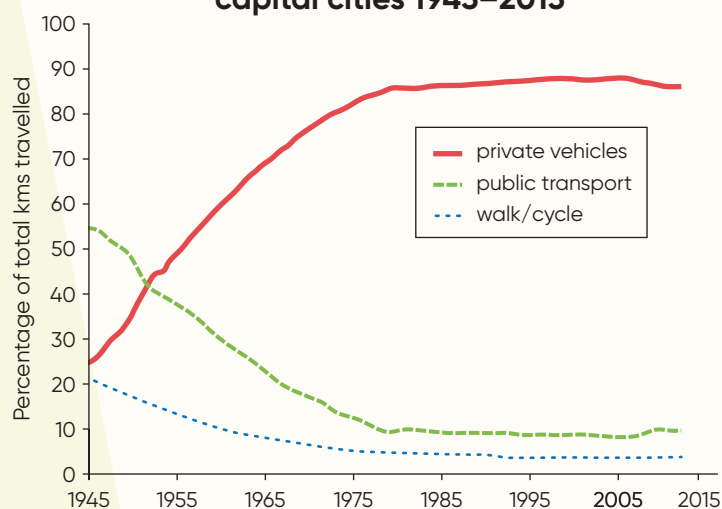


Songs about cars ...

Little Red Corvette Prince
Pink Cadillac Bruce Springsteen
Fun Fun Fun The Beach Boys
Drive My Car The Beatles
Mustang Sally Wilson Pickett
Brand New Car The Rolling Stones
I'm In Love With My Car Queen
Queen Of The Highway The Doors

- 1884** In London, Thomas Parker builds first practical electric car (shown above). Electric cars common until 1920s.
- 1885** Karl Benz in Germany produces first car with petrol internal-combustion engine.
- 1890s** Steam-powered cars introduced (in use until 1930s). First car imported into Victoria.
- 1908** By reducing vehicle assembly times in the USA, Henry Ford makes cars affordable for more people.
- 1948** First all-Australian car built – the Holden FX.
- 1990s** Renewed interest in electric cars and development of hybrid-powered (petrol and electric battery) cars.
- 2017** 1.18 million new vehicles sold in Australia (excluding trucks). Of these, 2624 are electric or hybrid vehicles.
- 2019** Average weekly cost to run a small car in Australia is about \$120 (\$6240 a year).

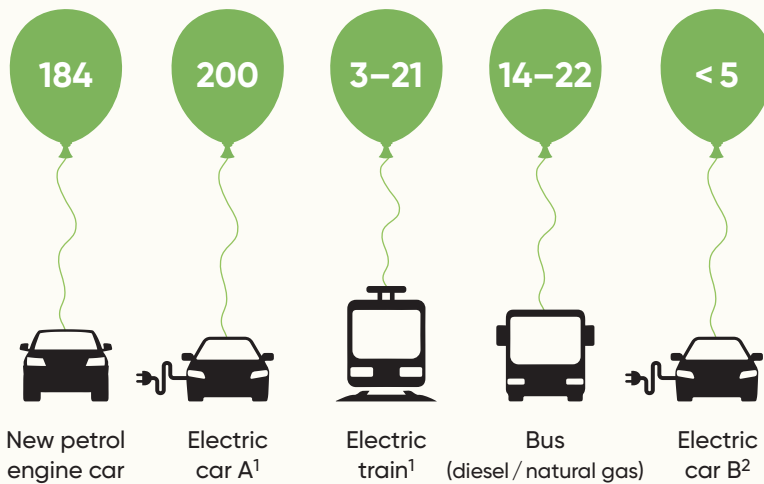
Travel modes in Australian capital cities 1945–2013



Melbourne, 2017



Average carbon dioxide (CO₂) emissions, 2017 (grams of CO₂ per person per km travelled)



¹ Powered using mostly non-renewable energy sources

² Powered using renewable energy sources

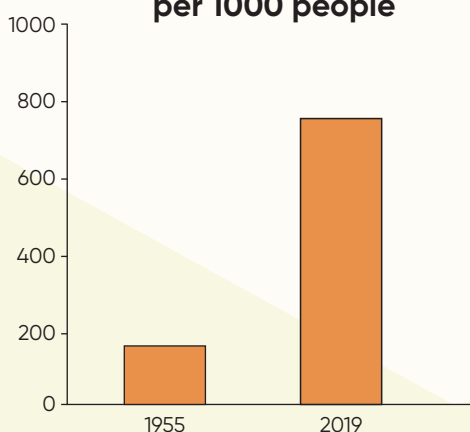
Our transport systems will not be drastically different in 2050. Many of us will not want to give up owning – and driving – our own cars.

Transport expert 1

We are on the edge of enormous change in private transport. The future involves electric power, driverless cars and vehicle sharing.

Transport expert 2

Number of cars in Australia per 1000 people



An autonomous (driverless) electric shuttle bus is being trialled in Perth.

WRITING TASK 2

To be answered in the answer book.

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.

To experience adventure is to learn.

Where there is no wi-fi signal, there is adventure.

Adventure isn't just about taking risks; you can be adventurous in everyday life.

There is no such thing as real adventure anymore.

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.

Answer **all** questions in pencil.

Shade your answers on the multiple-choice answer page (page 15) of the answer book.
Choose the response that is **correct**, or that **best answers the question**.

A correct answer scores 1; an incorrect answer scores 0.

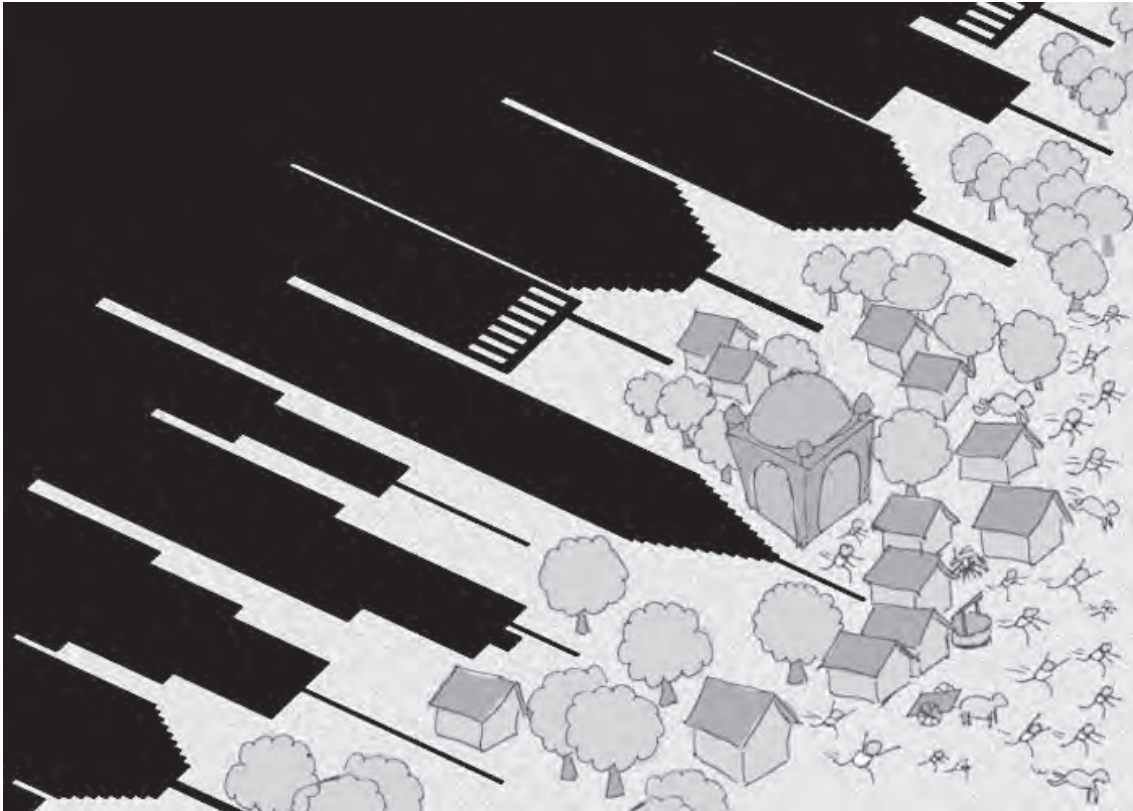
Marks will **not** be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

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UNIT 1**Question 1**

The image below is a black-and-white reproduction of a colour poster that was created for a poster exhibition held in New Delhi, India, in 2003.



- 1 The poster suggests that
- A modernisation represents progress.
 - B India should embrace western culture.
 - C traditional lifestyles are conservative and restrictive.
 - D modernisation does not necessarily raise peoples' standard of living.

UNIT 2

Questions 2 – 4

At a supermarket, customers who spend more than \$30 receive discount tokens.

Each token has nine circles. Either four or five of these circles are shaded black. The number and position of the black circles determines the discount (in dollars, \$) the customer receives.

To calculate the discount, the token is first divided into four overlapping 2×2 segments (as shown in Figure 1), and then the number of black circles in each segment is counted and added to give the dollar value of the discount.

For the token shown in Figure 1, a customer would receive a \$6 discount.

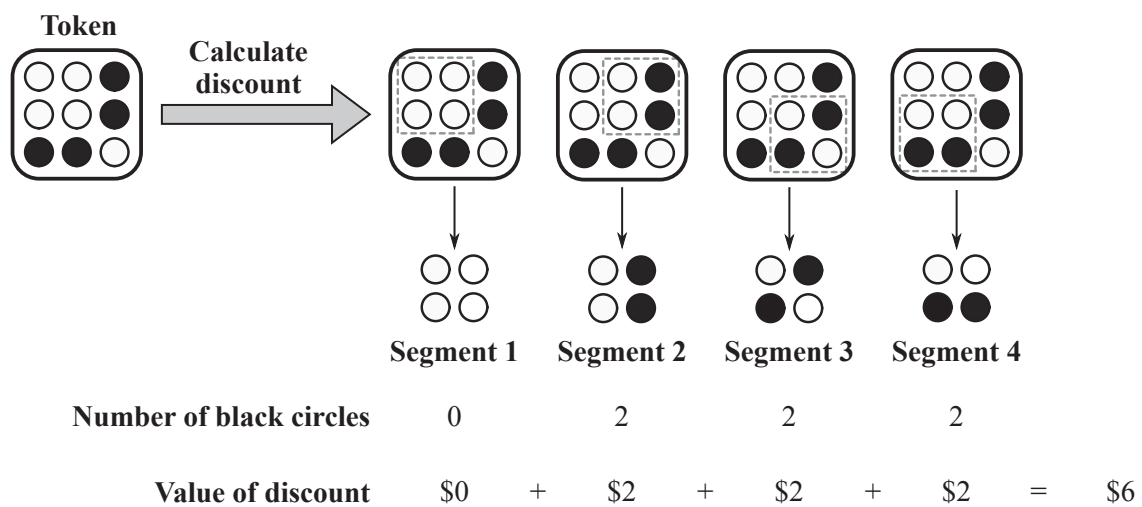
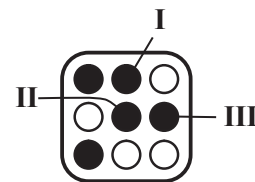


Figure 1

- 2 Consider the token shown at right.

Removing the black shading from which of circles **I**, **II** and **III** would most **reduce** the discount value of the token?

- A **I** only
- B **II** only
- C **III** only
- D **I** and **III** equally



Questions 3 and 4 refer to the following additional information.

The supermarket manager decides that the number of black circles on a token can be any number from 1 to 8.

- 3** A token gives a discount of \$5.

Which of the following could **not** be the number of black circles on this token?

- A** 2
- B** 3
- C** 4
- D** 5

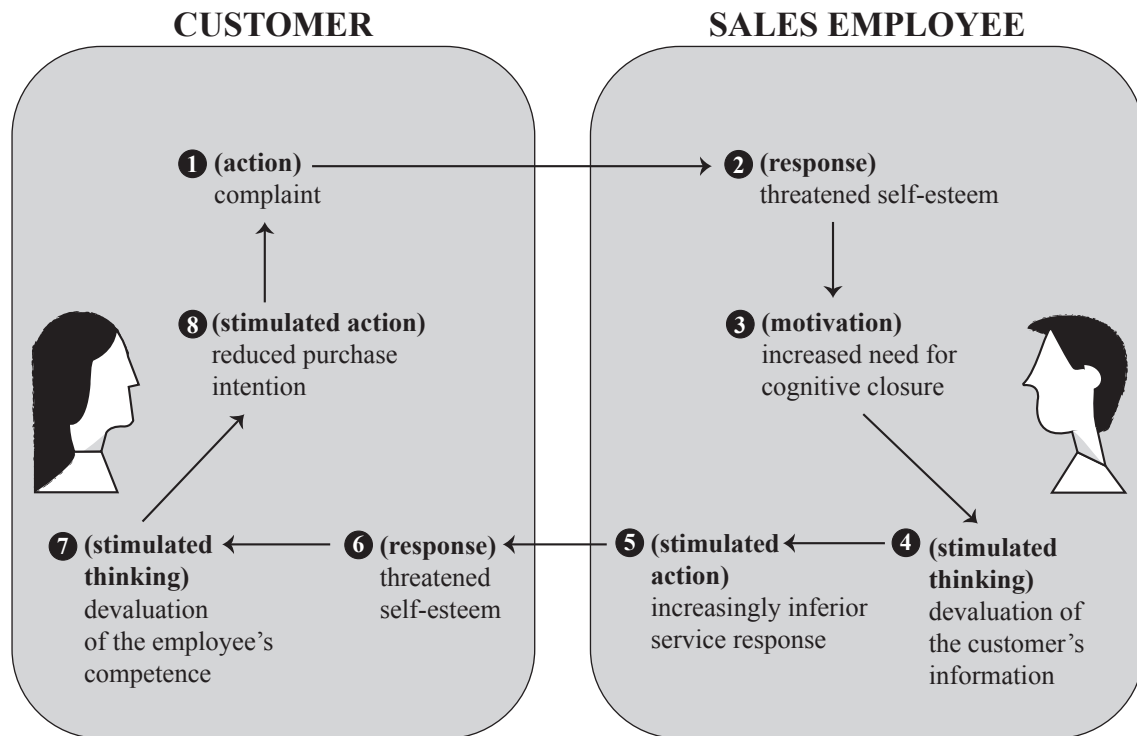
- 4** Which of the following discounts is **not** possible for a token with eight black circles?

- A** \$12
- B** \$13
- C** \$14
- D** \$15

UNIT 3

Questions 5 and 6

The diagram below depicts a common interaction between a customer and a sales employee when a customer is unhappy with a product or service.



- 5 The diagram presents the situation between the customer and the sales employee as
- A temporary.
 - B involuntary.
 - C self-perpetuating.
 - D self-contradictory.
- 6 The diagram suggests that, for the sales employee, seeking 'cognitive closure' (step 3) mainly involves
- A solving the problem.
 - B annoying the customer.
 - C denying the problem.
 - D remaining calm and composed.

UNIT 4**Questions 7 – 9**

The following passage is from a memoir.

Due to copyright restrictions,
this material is not supplied.

¹ *vainglorious*: excessively proud, big-headed

7 When the writer says that her younger self ‘knew nothing, really’ (line 6), she is being

- A candid.
- B frivolous.
- C accusatory.
- D studiously diplomatic.

8 ‘You don’t know what you don’t know when you’re young. How could you?’ (line 8)

Here, the writer is

- A expressing her frustration with youthful ignorance.
- B exaggerating the extent of youthful ignorance.
- C condemning her youthful ignorance.
- D excusing her youthful ignorance.

9 Lines 8–16 present older people’s advice to young people as

- A futile.
- B misleading.
- C ambivalent.
- D driven by envy.

UNIT 5

Questions 10 – 13

Historically, in many cultures, social rules banned people from marrying into the same social groups as either of their parents.

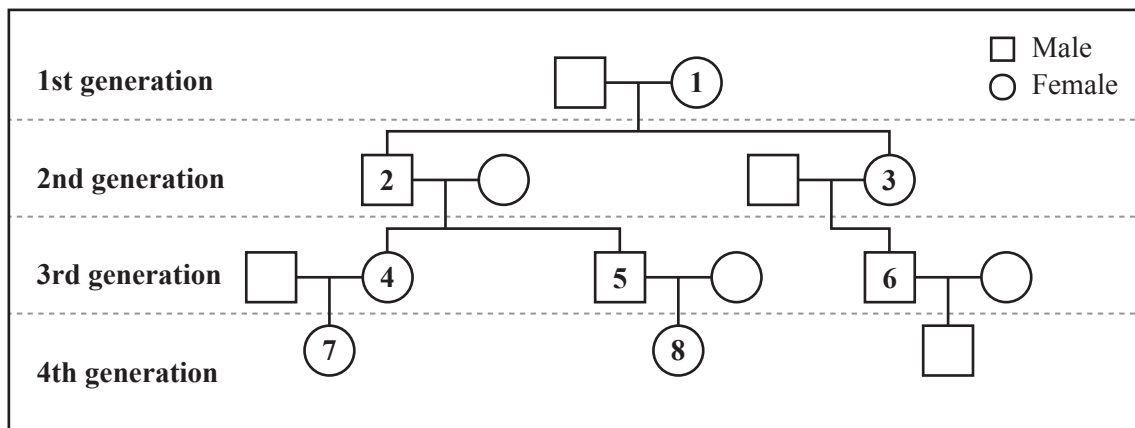
The table below gives a set of rules for people who were divided into one of eight social groups, S–Z.

Marriage rules	Man	Groups							
		S	T	U	V	W	X	Y	Z
	Woman	W	X	Y	Z	S	T	U	V
Group allocation	Children	Z	W	X	Y	V	U	T	S

For example:

- A man from group U could only marry a woman from group Y, and all of their children would belong to group X.
- A woman from group U could only marry a man from group Y, and all of their children would belong to group T.

The diagram below shows four generations of a family. Eight of the individuals are labelled 1 to 8.



- 10 Suppose 6 belonged to group T.
Of the following, who belonged to the same group as 3?
- A just 2
 - B just 8
 - C both 2 and 8
 - D neither 2 nor 8
- 11 Suppose 5 married someone from group Y.
Into which of the following groups must 6 have married?
- A S
 - B U
 - C W
 - D Y
- 12 If the group to which 8 belonged is known, for how many of 1 to 7 can a group be identified?
- A three
 - B four
 - C six
 - D seven
- 13 Suppose 7 belonged to group Z.
Which of the following groups has the greatest number of people represented in the family tree?
- A W
 - B X
 - C Y
 - D Z

UNIT 6

Questions 14 – 17

What is he?

What is he?

– A man, of course.

Yes, but what does he do?

– He lives and is a man.

Oh quite! But he must work. He must have a job of some sort.

5

– Why?

Because obviously he's not one of the leisured classes.

– I don't know. He has lots of leisure. And he makes quite beautiful chairs.

There you are then! He's a cabinet maker.

– No, no!

10

Anyhow a carpenter and joiner.

– Not at all.

But you said so.

– What did I say?

That he made chairs, and was a joiner and carpenter.

15

– I said he made chairs, but I did not say he was a carpenter.

All right then, he's just an amateur.

– Perhaps! Would you say a thrush was a professional flautist¹, or just an amateur?

I'd say it was just a bird.

– And I'd say he is just a man.

20

All right! You always did quibble.

DH Lawrence

¹ *flautist*: flute player

In the following questions, the first speaker in the poem is referred to as Speaker 1. The second speaker, whose lines are preceded by dashes, is Speaker 2.

- 14** Speaker 2's responses in lines 2, 4 and 8 are best described as
- A** ignorant and naive.
 - B** mocking and cynical.
 - C** attempts at humour.
 - D** intentionally literal.
- 15** Speaker 1's response 'Oh quite!' (line 5) is best described as
- A** abrupt and rude.
 - B** politely dismissive.
 - C** genuinely intrigued.
 - D** surprised and dismayed.
- 16** Line 6 is best described as a
- A** challenge.
 - B** reprimand.
 - C** snide comment.
 - D** vague response.
- 17** Which of the following best captures Speaker 2's view about people?
- A** They are intrinsically valuable.
 - B** They should value work more highly.
 - C** Humble people are an example to others.
 - D** They should have sufficient leisure time.

UNIT 7

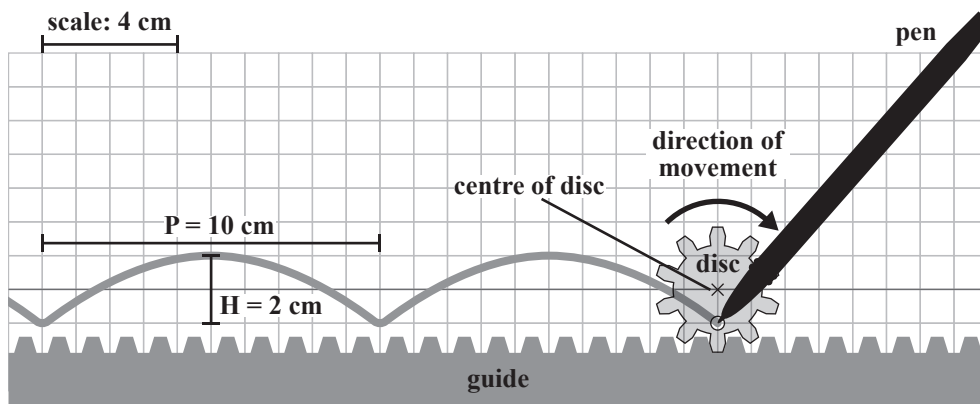
Questions 18 – 20

Zach uses discs with teeth, a guide and a pen to draw a pattern of curves.

Each disc has a hole that is large enough for the tip of the pen. The pen is used to roll the disc along the guide, and to draw a pattern on 1-centimetre square grid paper placed underneath, as shown in the figure.

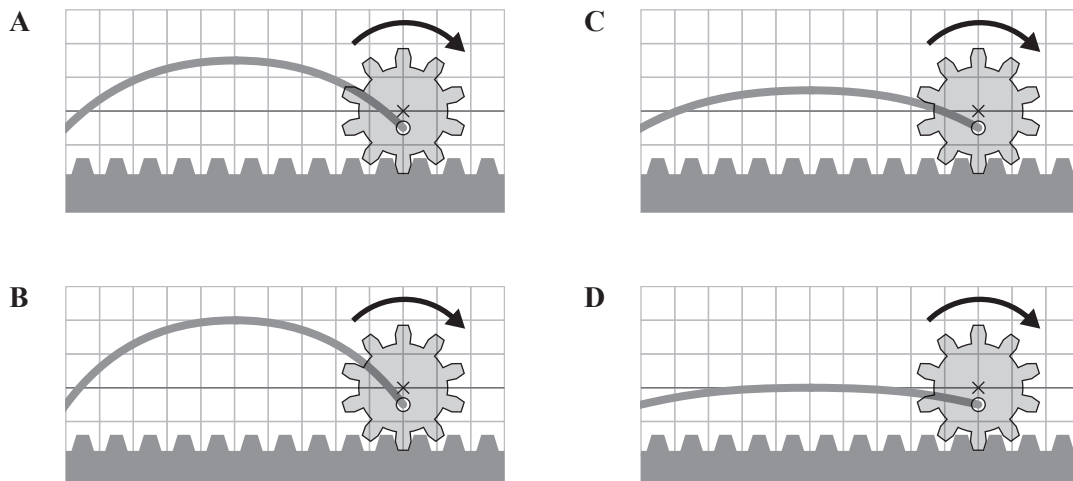
The height (H , in cm) of the pattern is the distance from its lowest point to its highest point, and the period (P , in cm) is the distance from the start of one curve to the next.

In the figure below, $H = 2$ and $P = 10$.

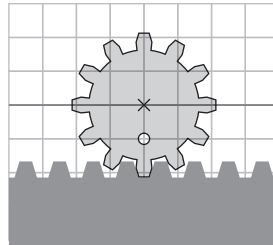


Different patterns can be drawn by using discs of different sizes that have a different number of teeth, and/or by changing the distance of the hole from the centre of the disc.

- 18 Which of the following best represents the pattern drawn using a disc with 10 teeth and a hole 0.5 cm from the centre?

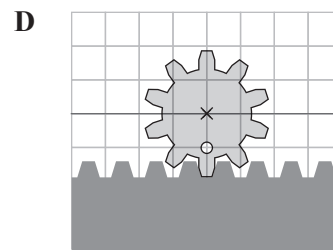
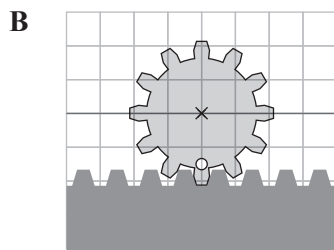
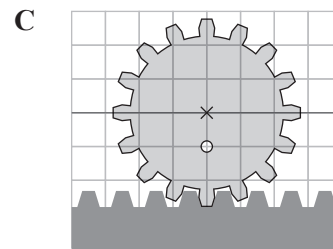
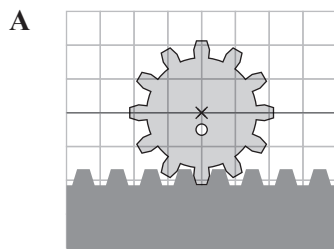


19 Consider disc **V**.



V

Compared with disc **V**, which of the following discs could be used to make a pattern that has a larger **P** but the same **H**?



20 What are the values of **P** and **H** for a pattern drawn using a disc with 20 teeth and a hole 2 cm from the centre?

	P (cm)	H (cm)
A	20	2
B	20	4
C	40	2
D	40	4

UNIT 8

Question 21



"Let me help you, dear."

- 21 The mother in the cartoon is presented mainly as
- A tolerant.
 - B pessimistic.
 - C tiresome.
 - D self-serving.

UNIT 9**Questions 22 and 23**

‘When I was a boy of fourteen, my father was so ignorant I could hardly stand to have the old man around. But when I got to be twenty-one, I was astonished at how much the old man had learned in seven years.’

Attributed to Mark Twain (1835–1910)

- 22** The quotation relies on the reader understanding that the father
- A** remained ignorant the entire time.
 - B** became more knowledgeable as time went on.
 - C** had not become less ignorant.
 - D** developed a stronger relationship with his son.
- 23** The quotation makes fun of
- A** fathers.
 - B** families.
 - C** education.
 - D** young people.

UNIT 10

Questions 24 – 27

Sam conducted four trials (I to IV) to determine the best way to cook an unfamiliar type of grain.

For each trial, Sam chose a cooking pan method (either open or closed) and a recipe with a specific amount of grain (R) in grams, g, and water in millilitres, mL. Sam noted the texture and the final mass ($R + A$, in grams) where A is the amount of water absorbed by the grain while cooking.

The table below gives the pan cooking method, recipe and results for each trial. Note that some values in the table have been rounded to two decimal places, and three values are represented by letters *S*, *T* and *U*.

Assume that:

- 180 g of R has a volume of 250 mL
- 250 mL of water has a mass of 250 g.

Note that, other than the differences outlined in the table, each trial was conducted in identical conditions.

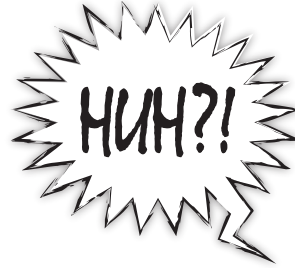
Trial	Pan method	Recipe		Results after cooking			
		R (g)	Water (mL)	$R + A$ (g)	$\frac{A}{R}$ (g)	$\frac{A}{R}$ (mL)	Texture of cooked grain
I	Open	180	500	540	<i>S</i>	1.44	Fluffy
II	Open	90	750	390	$3\frac{1}{3}$	2.40	Very sticky
III	Closed	90	250	<i>T</i>	$2\frac{1}{3}$	1.68	Slightly sticky
IV	Closed	90	375	240	$1\frac{2}{3}$	<i>U</i>	Slightly dry

- 24 In Trial **IV**, what is the value of U ?
- A 0.60
 - B 1.20
 - C 2.00
 - D 2.40
- 25 In Trial **III**, what volume of water was **not** absorbed by the grain during cooking?
- A 40 mL
 - B 90 mL
 - C 180 mL
 - D 210 mL
- 26 Suppose Sam uses an open pan method to cook 360 g of R to a Fluffy texture.
Which of the following is A?
- A 180 g
 - B 360 g
 - C 720 g
 - D 900 g
- 27 Which trial(s) resulted in the least amount of water being absorbed during cooking?
- A **II** only
 - B **III** only
 - C **IV** only
 - D **II** and **IV** equally

UNIT 11

Questions 28 – 30

According to recent research, *huh* is a universal word. Researchers analysed people's speech in different languages, and not only did all the languages have a word intended to initiate a quick clarification, it always resembled *huh*. The utterance, they argue, is a remarkable linguistic phenomenon.



5

Huh fits the definition of a true word. A true word is learned, and follows certain linguistic rules, depending on the language spoken. A laugh, cry or growl, however meaningful, isn't considered language. Another reason *huh* is considered a real word is because children don't use it until they start speaking, unlike innate vocalisations. So, *huh* exhibits linguistic conventions that speakers need to learn in order to use the form properly.

10

The existence of *huh* in different languages is a phenomenon explained by the theory of convergent evolution. This theory accounts for the appearance of a feature in different, often unrelated, organisms presumably because it works so well.

15

- 28 Based on the passage, what is the most likely reason that *huh* is used in so many languages?
- A It is highly efficient.
 - B It is deceptively complex.
 - C It does not require any effort.
 - D It combines humour and informality.
- 29 In relation to the word *huh*, what aspect of 'convergent evolution' (line 14) do researchers deem important?
- A It highlights the single origin of all human languages.
 - B It explains the existence of *huh* across diverse populations.
 - C It clarifies the uses of the word *huh* by different generations.
 - D It emphasises the similarities between human and animal communication.
- 30 The researchers' view that *huh* is a universal word is based on
- A logic.
 - B intuition.
 - C principle.
 - D comparison.

UNIT 12

Questions 31 and 32

Ice Form and *Slide Well* are skating schools that prepare students for an annual figure-skating competition. Students who participate in the competition receive a final score between 0 and 100.

A comparison of the competition scores for students from each school in 2008 and 2018 is given in the table below.

Note that some of the information in the table is missing (?), or represented by **X** or **2X**.

School	Year	Number of students		Percentage of students with a score	
		in the competition	with a score of 90 or higher	90 or higher (%)	50 or lower (%)
<i>Ice Form</i>	2008	2800	?	1	8
<i>Ice Form</i>	2018	3600	?	10	12
<i>Slide Well</i>	2008	600	X	?	?
<i>Slide Well</i>	2018	900	2X	?	?

- 31 If 10% of *Slide Well* students scored 90 or higher in 2008, how many *Slide Well* students scored 90 or higher in 2018?

A 60
 B 120
 C 180
 D There is insufficient information to determine this.

- 32 Suppose **X** = 70.

Which of the following statements is best supported by the data?

Compared with students at the 2008 competition, students at the 2018 competition were

A less likely to score 90 or higher.
 B less likely to score 50 or lower.
 C more likely to score between 50 and 90.
 D more likely to score 90 or higher.

UNIT 13

Questions 33 – 36

The following passage is from the introduction to a collection of essays about the writing of crime fiction.

The very popularity and mass appeal of crime fiction initially made it an unlikely subject for scholarly pursuit, except for the critical musings of early writers and some of their acolytes¹ in their attempt ‘to justify their writing and reading habits’. It was in the 1960s and 1970s that a wealth of academic literature began to emerge on the history and typology² of the genre, later also on ideological frameworks and the social contexts in which they were placed. Today, research on crime fiction continues to thrive, particularly on the novel and its various sub-genres (the clue-puzzle, the ‘hardboiled’ or private-eye story, the police procedural, the psychological thriller, etc.), with prestigious academic publishers devoting whole book series to the genre. 5

While the ‘anatomy’ of the prototypes of crime fiction seems to be rather well described, a closer investigation of the ever-increasing corpus shows that such an approach might provide us with a blurred x-ray of the skeleton, but not an image of the entire body. The boundaries of the genre have become fuzzier than ever, stretching over a wide range of registers, themes and styles, from pulp fiction³ to highly literary novels with elements of crime, from cosy mysteries with a sense of closure to fragmented narratives focusing on racial tensions, gender conflicts or the morals of violence. While the very diversity of the genre is often obscured by marketing strategies of publishing houses where a clear identification of the genre is a vital selling point, such business tactics cannot deny that former classifications of crime writing as part of a ‘low’ or ‘popular’ literature have long been rendered 10
invalid. Now the search continues for ‘other’, more appropriate critical paradigms⁴. 15
20

¹ *acolytes*: followers

² *typology*: various forms

³ *pulp fiction*: lurid fiction, often printed on low-quality paper

⁴ *paradigms*: frameworks

33 Lines 1–3 suggest that the ‘critical musings’ (line 2) of early crime-fiction writers and fans were

- A** scholarly.
- B** unoriginal.
- C** self-serving.
- D** entertaining.

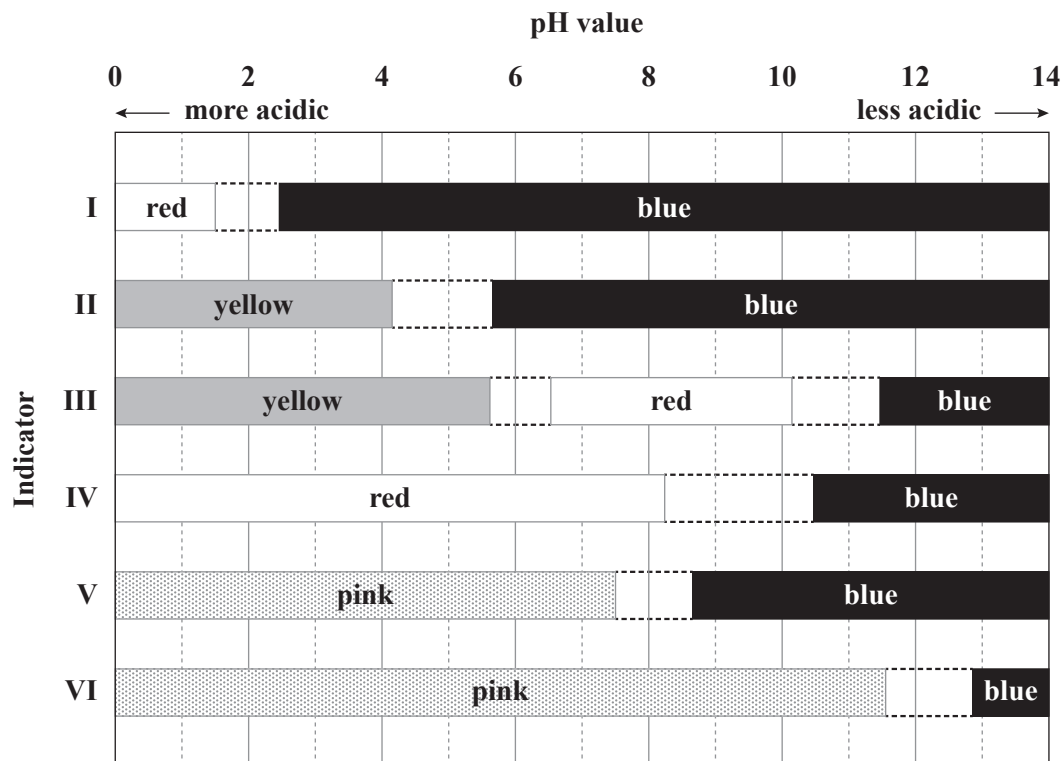
- 34 Lines 1–3 suggest that, before the 1960s, the attitude of most academics towards early crime fiction was
- A charitable.
 - B respectful.
 - C suspicious.
 - D dismissive.
- 35 Lines 17–21 suggest that publishing houses have
- A misrepresented crime fiction.
 - B discouraged academic interest in crime fiction.
 - C increased the appeal of crime fiction through marketing.
 - D devoted fewer resources to marketing crime fiction than other genres.
- 36 The passage suggests that other ‘critical paradigms’ (line 21) are needed to
- A simplify crime fiction’s sub-genres.
 - B properly legitimise crime fiction as a genre.
 - C respond to the breadth of work in the crime-fiction genre.
 - D improve the quality of academic research into crime fiction.

UNIT 14

Questions 37 – 39

Kylie has six different pH indicators (**I**, **II**, **III**, **IV**, **V** and **VI**) that she can use to estimate the pH value (acidity) of colourless solutions. When an indicator is added to a solution, the solution changes colour according to the pH value.

The colour changes that occur at different pH values for each of the indicators are shown in the figure.



For example, when indicator **I** is added to a solution with a pH value

- lower than 1.5, the solution will turn red
- between 1.5 and 2.5, the solution will be an intermediate colour (not red or blue)
- higher than 2.5, the solution will turn blue.

37 A solution with which of the following pH values would turn two indicators red, two indicators blue and two indicators pink?

- A** 1
- B** 3
- C** 7
- D** 8

- 38** In Trial 1, Kylie tested four solutions (**Q**, **R**, **S** and **T**) with indicators **I**, **II**, **III** and **IV**.

The following table shows the number of indicators for which the solutions turned red and yellow. The number of solutions that turned blue is not shown.

Solution	Number of indicators for which the solution turned red	Number of indicators for which the solution turned yellow
Q	two	two
R	one	two
S	one	none
T	two	none

Which of indicators **V** and **VI** could Kylie use to reduce the range of her estimate of the pH value of **S**?

- A** **V** only
 - B** **VI** only
 - C** both **V** and **VI**
 - D** neither **V** nor **VI**
- 39** In Trial 2, Kylie tested another solution, **Z**, with two different indicators. From the results, she estimated the pH value of the solution to be between 6.5 and 7.5.

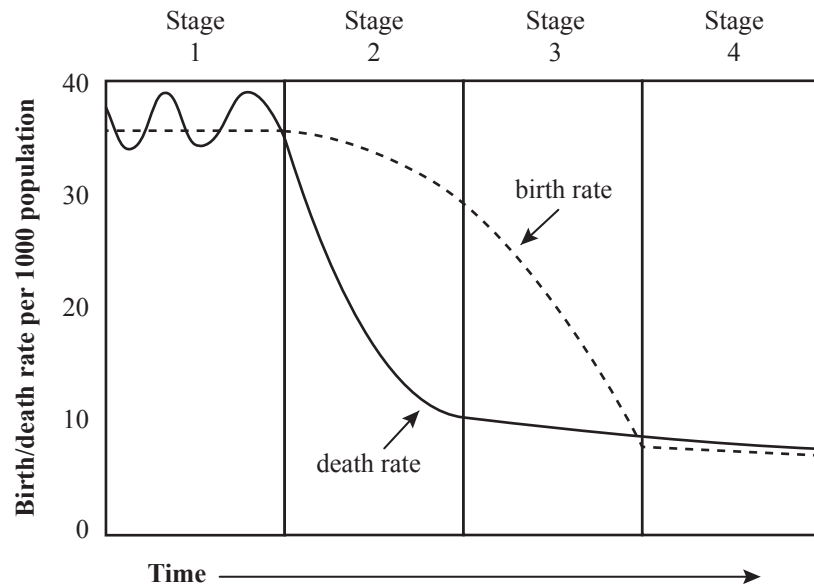
Which of the following pairs of indicators did she most likely use?

- A** **II** and **IV**
- B** **II** and **V**
- C** **III** and **IV**
- D** **III** and **V**

UNIT 15

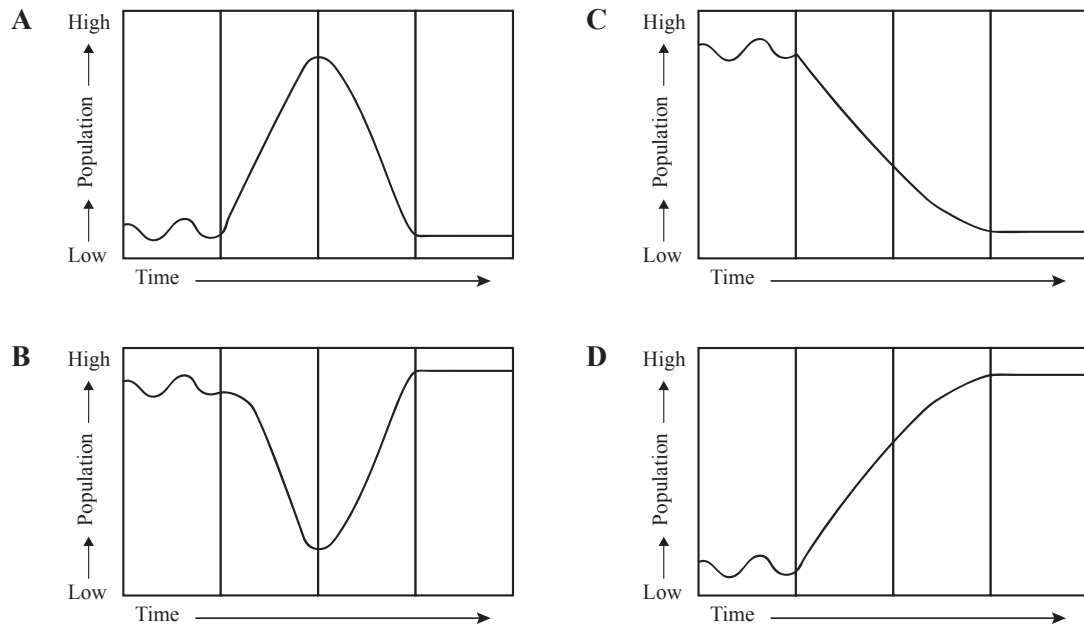
Questions 40 – 42

The following graph presents a theory of demographic transition: how a country's population changes as its economy develops.



- 40 According to the theory, at which stage of economic development does a country experience the most rapid rise in population?
- A Stage 1
 - B Stage 2
 - C Stage 3
 - D Stage 4
- 41 In which two stages of development is a country's population most stable?
- A Stage 1 and Stage 2
 - B Stage 2 and Stage 3
 - C Stage 3 and Stage 4
 - D Stage 1 and Stage 4

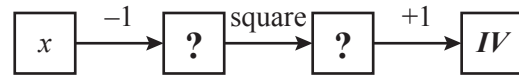
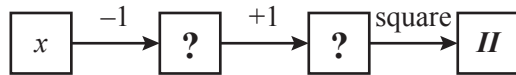
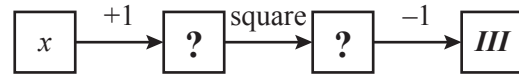
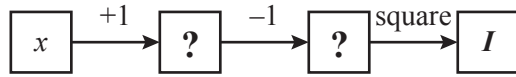
- 42 Which one of the following graphs most accurately illustrates the change in the size of a country's population as it moves from Stage 1 to Stage 4?



UNIT 16

Questions 43 – 46

Consider the following four flow charts.



Each flow chart uses the same input number, x , where x is a positive or a negative integer (but not zero), to produce the numbers I , II , III and IV .

43 If $x < 0$ and $I = 64$, what is the value of IV ?

- A 48
- B 50
- C 80
- D 82

44 When $x < 0$, which of the following is always true?

- A $x = 1 + \sqrt{(IV + 1)}$
- B $x = 1 - \sqrt{(IV - 1)}$
- C $x = -1 - (IV + 1)^2$
- D $x = 1 + (IV - 1)^2$

- 45 If $5I = 4III$, then x must be equal to
- A 8, but not -8
 - B -8 , but not 8
 - C either 8 or -8
 - D neither 8 nor -8
- 46 Which of the following is always true?
- i $I = II = III = IV$
 - ii $I = II$ and $III = IV$, but $II \neq III$
- A i only
 - B ii only
 - C both i and ii
 - D neither i nor ii

UNIT 17

Questions 47 – 51

The following passage is from a novel. The main speaker is named Framboise.

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- 47 The word ‘vessel’, as it is used in line 6, suggests that Framboise’s mother regarded Framboise as
- A an obstacle.
 - B a repository.
 - C obstinate and selfish.
 - D lacking power and initiative.
- 48 The ‘album’ (line 7) is best described as
- A contrived.
 - B unsystematic.
 - C inconsequential.
 - D impenetrable.
- 49 In lines 16–21, how does Framboise view the ‘incidents’ referred to in her mother’s album?
- A as complete fantasies
 - B as worrying discoveries
 - C with amused appreciation
 - D with curious bewilderment
- 50 The ‘language’ referred to in lines 19 and 20 was invented by Framboise’s father, Yannick, who used to speak it often.
Its inclusion in the album suggests that Yannick’s
- A memory is being honoured.
 - B intellect is being acclaimed.
 - C behaviour is being mocked.
 - D language is being misused.
- 51 What is it about the poem that most likely ‘troubles’ Framboise (line 31)?
- A The poem is a painful reminder of her family’s difficult past.
 - B She finds the poem a painful reminder of the fleetingness of life.
 - C The poem indicates that her mother did not achieve what she wanted to in life.
 - D She finds it difficult to associate the poem with what she knows of her mother.

UNIT 18

Questions 52 – 55

Surfers apply surfwax to their boards to avoid slipping off while surfing.

Sonya uses a brand of surfwax called Grippy but she is thinking of changing to another brand. She tests seven other brands (I to VII) and compares their properties with those of Grippy.

Each of these brands contains different percentages of up to five of the following seven components: paraffin wax, soy wax, petroleum jelly, micro-crystalline wax, additive X, additive Y and a binding agent.

The components of each brand of surfwax and Sonya's observations are shown in the table below.

	Brands of surfwax							
Components of surfwax	Grippy	I	II	III	IV	V	VI	VII
Paraffin wax	75%	75%	65%	65%	-	-	-	-
Soy wax	-	-	-	-	75%	75%	65%	65%
Petroleum jelly	5%	5%	10%	10%	5%	5%	10%	5%
Micro-crystalline wax	10%	5%	15%	15%	10%	5%	15%	10%
Additive X	-	5%	-	5%	-	5%	-	5%
Additive Y	-	-	5%	-	5%	-	5%	-
Binding agent	10%	10%	5%	5%	5%	10%	5%	15%
Properties compared with Grippy								
Ease of application	easier		easier		easier		easier	
Ease of removal		easier	easier			easier	easier	
Durability		greater		greater		greater		
Grip	less	more	more		less	more		
Texture		softer	softer			softer		

Assume that:

- all tests were conducted under identical conditions
- the binding agent has **no** effect
- other components affect one property and the components do not interact
- except for the differences indicated, each surfwax has identical properties to Grippy.

- 52 Which of the following most likely explains why **II** is more durable than Grippy?
- A the presence of additive Y
 - B a lower percentage of paraffin wax
 - C a higher percentage of petroleum jelly
 - D a higher percentage of micro-crystalline wax
- 53 Which of the following changes to the components of **VII** would be least likely to affect its properties?
- A replacing additive X with additive Y
 - B replacing the soy wax with paraffin wax
 - C replacing the micro-crystalline wax with petroleum jelly
 - D replacing the petroleum jelly with micro-crystalline wax
- 54 Suppose Sonya tests another surfwax, **VIII**.
Compared with Grippy, **VIII** would most likely be
- A easier to remove and easier to apply.
 - B more durable and have a softer texture.
 - C more durable and have the same texture.
 - D easier to remove and have a softer texture.
- VIII**

SURFWAX

Paraffin wax	75%
Petroleum jelly	5%
Micro-crystalline wax ...	10%
Additive Y	5%
Binding agent	5%
- 55 A surfwax containing which of the following will most likely have a softer texture than Grippy?
- A 5% additive Y
 - B 10% petroleum jelly
 - C 15% micro-crystalline wax
 - D 65% soy wax

UNIT 19

Questions 56 – 58

The following passage is the opening of a short story where the speaker, who now teaches at a university, describes the significance of working on a fishing boat with his father.

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¹ 1 mile = 1.6 km

- 56 When the speaker describes himself as ‘foolishly alone’ (line 6), it is most likely that he
- A realises there is no reason to get up.
 - B realises that his behaviour is immature.
 - C is regretting his choice of a solitary life.
 - D is regretting that he no longer goes out in the boat.
- 57 In contrast to the boat that ‘rides restlessly in the waters’ (line 7), the land is depicted as
- A stable.
 - B parched.
 - C nurturing.
 - D unreliable.
- 58 The speaker walks to the all-night restaurant although he does not need to get up for some time. Based on the passage, one plausible reason for this is that he wants to
- A convince himself that there is no one outside.
 - B remove himself from unsettling memories.
 - C delude himself that nothing has changed.
 - D start afresh and establish good habits.

UNIT 20

Questions 59 – 62

Habit Stop is a program designed to help people stop an unwanted habit, such as fingernail biting. Before beginning the program, each participant is assigned to a Start Group according to:

- habit severity: low (**L**), moderate (**M**) or severe (**S**)
- level of stress associated with the habit: low (**i**), moderate (**ii**) or high (**iii**).

For example, a participant with a severe habit (**S**) and moderate stress (**ii**) is placed into Start Group **Sii**. At the end of the program, each participant is reassessed and assigned to an End Group. Participants with no measurable change in either habit severity or level of stress are assigned to the same End Group as their Start Group.

A *Habit Stop* program was run over a week with 100 participants in each Start Group. The table shows the number of participants from each Start Group who were assigned to each End Group. For example, 12 of those who began the program in Start Group **Mii** were assigned to End Group **Miii** at the end of the program.

Some data in the table is represented by the letters **W**, **X**, **Y** and **Z**. Empty cells indicate no participants.

		Number of participants								
Start Group	Li	70	11		12	7				
	Lii	54	31	W						
	Liii	37	21	35			7			
	Mi	32	1	1	39	24	2			1
	Mii	31	6	4	30	17	12			
	Miii	25	7	6	20	X	28		1	3
	Si	16			26	26	3	9	18	2
	Sii	16	5		19	Y	3	3	29	Z
	Siii	15	9	7	4	20	24	2	7	12
	Li	Lii	Liii	Mi	Mii	Miii	Si	Sii	Siii	
End Group										

- 59 Which of the following **must** be true?
- A $X = 10$
 - B $Y = 10$
 - C $X + Y = 6$
 - D $Y - Z = 25$
- 60 Of those who started the program with habit severity **S**, how many **must** have ended the program with an unchanged habit severity classification?
- A fewer than 82
 - B exactly 82
 - C at least 82 but fewer than 108
 - D 108 or more
- 61 The percentage of participants who ended the program with no measurable change in either habit severity or level of stress was
- A 20.
 - B 25.
 - C 27.
 - D 30.
- 62 Based on this data, in future *Habit Stop* programs which of the following will most likely represent the greatest number of participants with a measurably reduced habit severity?
- A participants from Start Group **S** who are assigned to End Group **L**
 - B participants from Start Group **S** who are assigned to End Group **M**
 - C participants from Start Group **M** who are assigned to End Group **L**
 - D This cannot be determined without the value of **Y**.

UNIT 21

Questions 63 – 66

Emma represents fractions using numbers inside shaded and unshaded regular polygons.

For example:



63 Which of the following equals 1?

A  $\times$ 

C  $\div$ 

B  $\times$ 

D  $\div$ 

64  $+$  $=$

A 

C 

B 

D 

65 $\boxed{2} \div \boxed{8} =$

A $\boxed{1}$

C $\boxed{1}$

B $\boxed{4}$

D $\boxed{2}$

66 Which of the following is equivalent to the 10-sided polygon shown here?



A $\boxed{12} + \boxed{3}$ only

B $\boxed{12} + \boxed{3}$ only

C both $\boxed{12} + \boxed{3}$ and $\boxed{12} + \boxed{3}$

D neither $\boxed{12} + \boxed{3}$ nor $\boxed{12} + \boxed{3}$

UNIT 22

Questions 67 – 70

On the opposite page is a copy of a painting by 17th-century Dutch artist Pieter de Hooch (Figure 1). It is a typical example of his work depicting the interiors of middle-class Dutch homes. Passage 1 is from an analysis of de Hooch's domestic interior scenes.

- 67 In lines 1 and 2 of Passage 1, the writer suggests that the Dutch middle class
- A lacked taste.
 - B disliked affectation.
 - C were progressive.
 - D were fixated on beauty.
- 68 Both Figure 1 and Passage 1 suggest that, for the Dutch middle class, the home was an expression of
- A social ambition.
 - B individual taste.
 - C personal virtue.
 - D family intimacy.
- 69 Which one of the following phrases from Passage 1 does the woman in Figure 1 best exemplify?
- A 'an openness about what is' (line 2)
 - B 'a pride about rectitude' (line 2)
 - C 'not much tolerance for human fallibility' (line 4)
 - D 'a forgiving urbanity' (line 5)
- 70 Which one of the following sayings best reflects what the writer of Passage 1 observes about the Dutch middle class?
- A 'Home is where the heart is.'
 - B 'Behind every front door lie a family's secrets.'
 - C 'A clean house is the purest emblem of the mind.'
 - D 'A home is a safe haven from the appraisal of others.'



Figure 1: *Interior with a woman reading and a child with a hoop*

Passage 1

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GAT 2020 source references

Mayank Bhatnagar, New Delhi poster, 2003

Anna Quindlen, *Lots of Candles, Plenty of Cake*, Random House, 2013

DH Lawrence, 'What is He?', in Geoffrey Summerfield (ed.), *Voices: an Anthology of Poetry and Pictures, the Third Book*, Penguin Education, 1968

Robert Weber, 'Let me help you, dear', *The New Yorker*, 2001

Christine Matzke and Susanne Muhleisen, 'Postcolonial Postmortems: Issues And Perspectives' in *Postcolonial Postmortems: Crime Fiction from a Transcultural Perspective*, Rodopi, 2006

Joanne Harris, *Five Quarters of the Orange*, Black Swan Books, 2001

Alistair MacLeod, 'The Boat', *Island: Collected Stories*, WW Norton, 2011

Pieter de Hooch, *Interior with a woman reading and a child with a hoop*, 1662–1666; in John Carroll, *Ego and Soul: The Modern West in Search of Meaning*, Harper Collins, 1999