**Victorian Certificate of Education
2014**

General Achievement Test

Wednesday 11 June 2014

**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

Type of questions	Number of questions to be answered	Suggested times (minutes)	Suggested time allocation
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 40 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 **name** on the answer book.
- Write your **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 the 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.
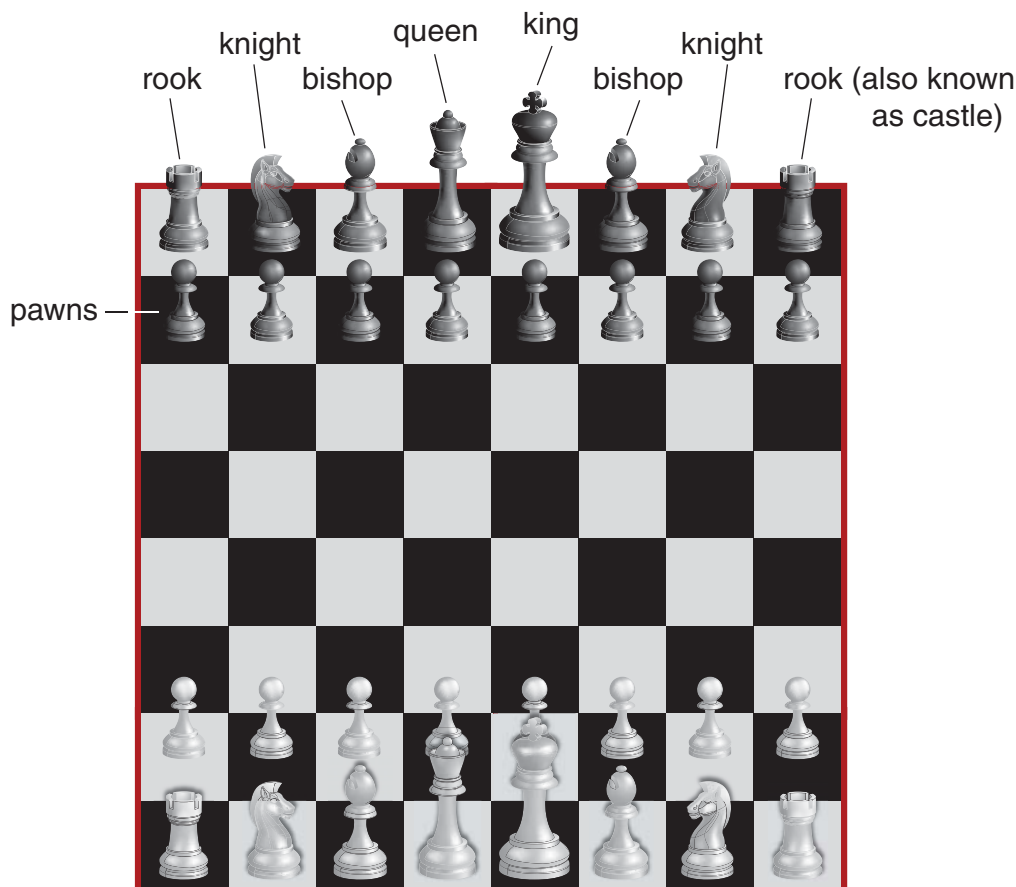
A research paper into the relationship between military strategy and chess

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.

The Value of Stealth in the Game of Chess

Peter Smet, Don Gossink, and Greg Calbert

Command and Control Division, Defence Science Technology Organisation (DSTO), PO Box 1500, Edinburgh 5111, Australia
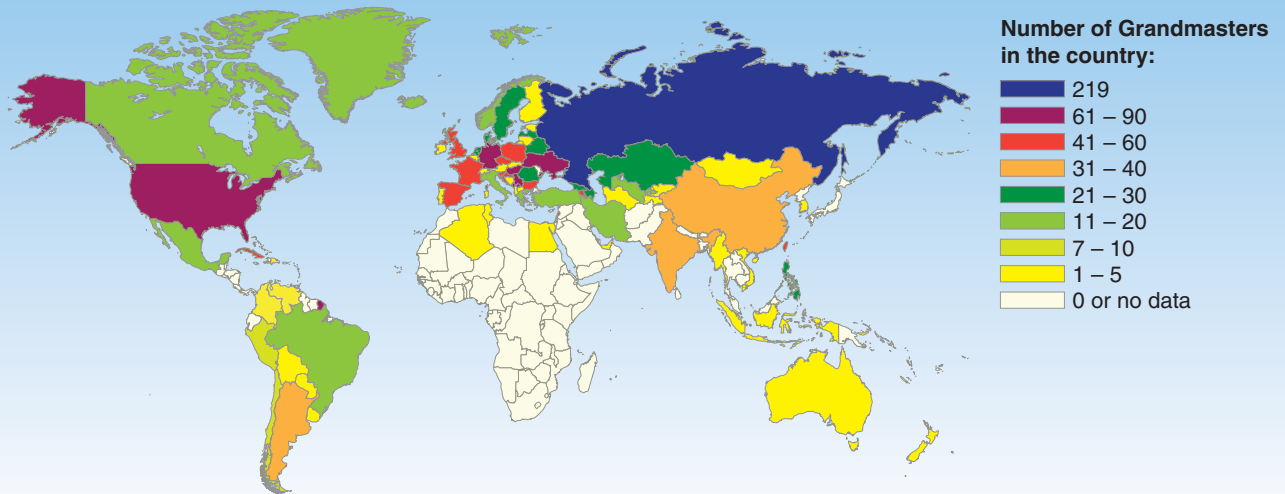
rook   knight   bishop   queen   king   bishop   knight   rook (also known as castle)

pawns —

- Chess is a game played by two people on a chessboard, with sixteen pieces (of six types) for each player. Each type of piece moves in a distinct way.

- The goal of the game is to checkmate; that is, to threaten the opponent's king with inevitable capture.

White 00:32
Ralph

Black 00:24
Trainer 1200 Elo

Mode: Me vs Trainer

Threats   Details   Suggestions

Game Rules Moves Settings

Image from a Chess App

Elo Rating System

- The **Elo rating system** is a method for calculating the relative skill levels of players in competitor-versus-competitor games including chess.

  The following information from the World Chess Federation (FIDE, November 2012) gives an impression of what a given FIDE Elo rating means:

  – 42 players had an Elo rating between 2700 and 2799

  – 4 players had an Elo rating over 2800

  – the current world champion Magnus Carlsen, at age 19, had an Elo rating of 2872.

Chess Grandmasters Map
October 2013

Number of Grandmasters in the country:
- 219
- 61 – 90
- 41 – 60
- 31 – 40
- 21 – 30
- 11 – 20
- 7 – 10
- 1 – 5
- 0 or no data

The title **Grandmaster** is awarded to chess players by the World Chess Federation (FIDE). Apart from World Champion, Grandmaster is the highest title a chess player can attain. Once achieved, the title is held for life.

Image of how an army might have looked between 300 BC and 300 AD when chess was invented. Wars were fought with chariots (rooks), elephants (bishops), knights and infantry (pawns), headed by a king and his vizer (queen).

HOW CHESS IMPROVES YOUR BRAIN POWER

People over 75 who play brain-stretching games like chess are less likely to develop dementia.

JAN FEB MAR APR

Students in a New York City chess program improved reading scores more than non-chess-playing students.

A study of 4000 South American students showed rises in IQ scores after 4 months of chess instruction.

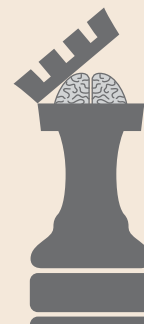Playing chess grows dentrites, which conduct brain signals, and the prefrontal cortex, which coordinates planning, judgement and self-control.

Playing chess helps develop creativity by stimulating the right side of your brain.

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; and
• how effectively you express yourself.

Privacy is a basic human right that should be respected by all governments.

Security cameras and internet monitoring are a necessary evil in today's world where our safety is constantly under threat.

All citizens should be able to go about their lives without being monitored, photographed or tracked by cameras.

Hi-tech security measures provide reassurance to law-abiding citizens. Only law-breakers need to fear their presence.

MULTIPLE-CHOICE QUESTIONS

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

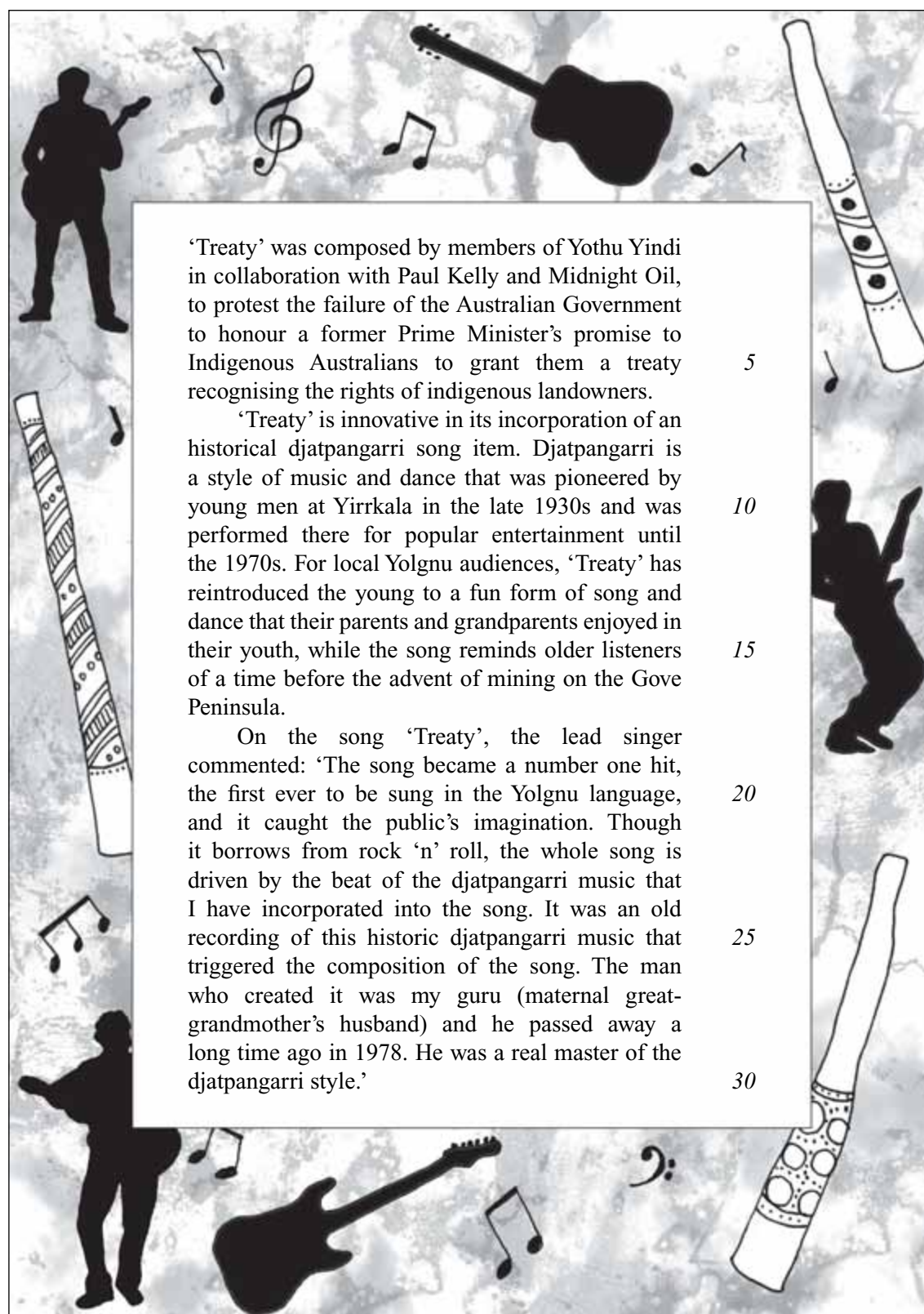*You are advised to allocate 2 hours to this task.*

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

Questions 1 – 3

The following passage is from an interview with the indigenous performer and lead singer of the band Yothu Yindi. The band is well-known for their song 'Treaty'.

'Treaty' was composed by members of Yothu Yindi in collaboration with Paul Kelly and Midnight Oil, to protest the failure of the Australian Government to honour a former Prime Minister's promise to Indigenous Australians to grant them a treaty recognising the rights of indigenous landowners.   *5*

'Treaty' is innovative in its incorporation of an historical djatpangarri song item. Djatpangarri is a style of music and dance that was pioneered by young men at Yirrkala in the late 1930s and was performed there for popular entertainment until the 1970s. For local Yolgnu audiences, 'Treaty' has reintroduced the young to a fun form of song and dance that their parents and grandparents enjoyed in their youth, while the song reminds older listeners of a time before the advent of mining on the Gove Peninsula.   *10*   *15*

On the song 'Treaty', the lead singer commented: 'The song became a number one hit, the first ever to be sung in the Yolgnu language, and it caught the public's imagination. Though it borrows from rock 'n' roll, the whole song is driven by the beat of the djatpangarri music that I have incorporated into the song. It was an old recording of this historic djatpangarri music that triggered the composition of the song. The man who created it was my guru (maternal great-grandmother's husband) and he passed away a long time ago in 1978. He was a real master of the djatpangarri style.'   *20*   *25*   *30*

1   According to the lead singer, the song 'Treaty' was a hit mainly because of its

    A   focused appeal to a specific audience.
    B   blend of different styles of music.
    C   light-hearted and simple lyrics.
    D   serious content and aims.

2   According to the lead singer, djatpangarri music is

    A   a secondary feature of the song.
    B   an outmoded element of the song.
    C   a controversial addition to the song.
    D   a fundamental component of the song.

3   The passage suggests that the song 'Treaty' makes 'older listeners' (line 15) feel

    A   nostalgic and contemplative.
    B   restless and undervalued.
    C   outraged and combative.
    D   grateful and celebratory.

UNIT 2

Questions 4 – 6

The figure indicates the types of internet blocking carried out by sixteen countries (**A**–**P**).

- The three types of blocking are: ***Political***, ***Social*** and ***Security***. Each of these types, as well as ***No blocking***, is represented by a circle.
- The triangles within each area represent democratic countries. All other regions represent non-democratic countries.
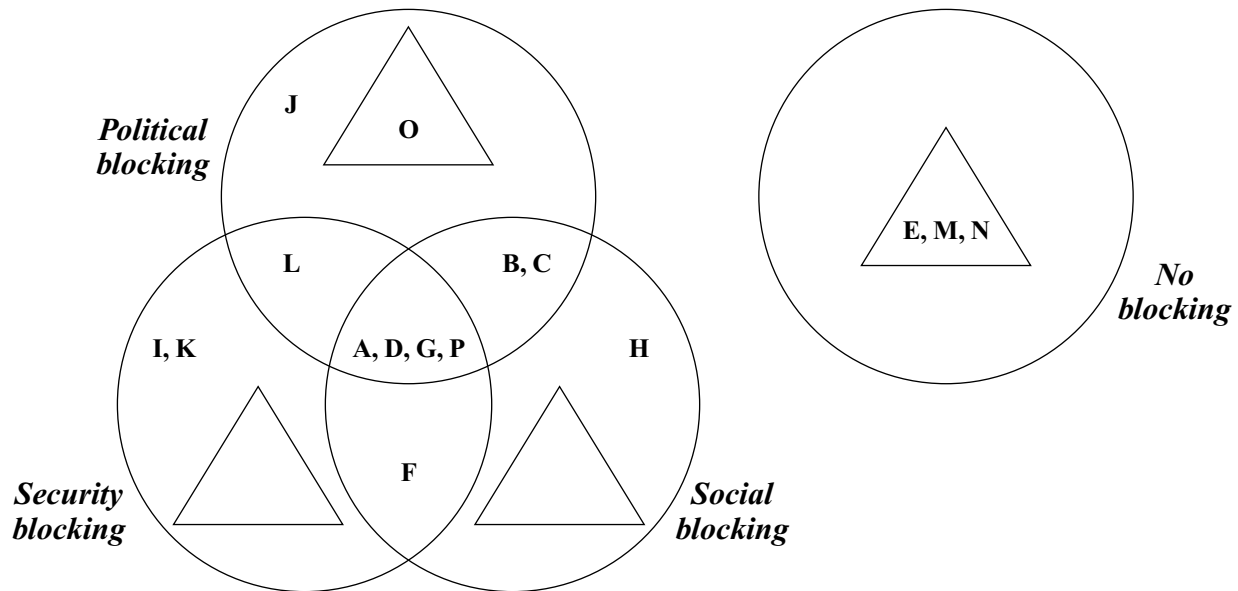
4   How many countries engaged in at least two types of blocking?

- **A**   four
- **B**   six
- **C**   eight
- **D**   more than eight

5   If one of the sixteen countries is selected at random, what is the chance it is democratic and engages in blocking?

- **A** $\dfrac{1}{16}$
- **B** $\dfrac{1}{8}$
- **C** $\dfrac{3}{16}$
- **D** $\dfrac{1}{4}$

6   Which of the following statements is best supported by the figure?

- **A**   Democratic countries do not engage in blocking.
- **B**   The three types of blocking never occur together.
- **C**   Blocking occurs in all the non-democratic countries.
- **D**   More countries engage in social blocking than other kinds of blocking.

UNIT 3

Question 7

Due to copyright restrictions,
this material is not supplied.

7 The cartoon's main suggestion is that

    A the potential dangers of farming technology have been avoided.
    B the human world will soon be at the mercy of farming technology.
    C farming technology will soon enable animals to look after themselves.
    D expectations about farming technology have become somewhat ridiculous.

UNIT 4

Questions 8 – 10

The figure shows the changes of the value (in points) of a share market over a 12-week period.

For each working week (Monday to Friday), the range of points between the start of the week (Open) and the end of the week (Close) is indicated by a rectangle with vertical lines at the top and bottom.

The rectangle indicates the opening and closing points for the week.

The vertical lines indicate the highest and lowest points during the week.

A white rectangle shows a week where the points increased from the start to the end of the week (**Up**); while a black rectangle shows a week where the points decreased from the start to the end of the week (**Down**).
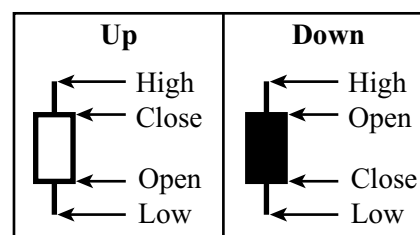
The value at the end of one week is not necessarily the value at the start of the next week due to changes over the weekend.

Up	Down
← High	← High
← Close	← Open
← Open	← Close
← Low	← Low
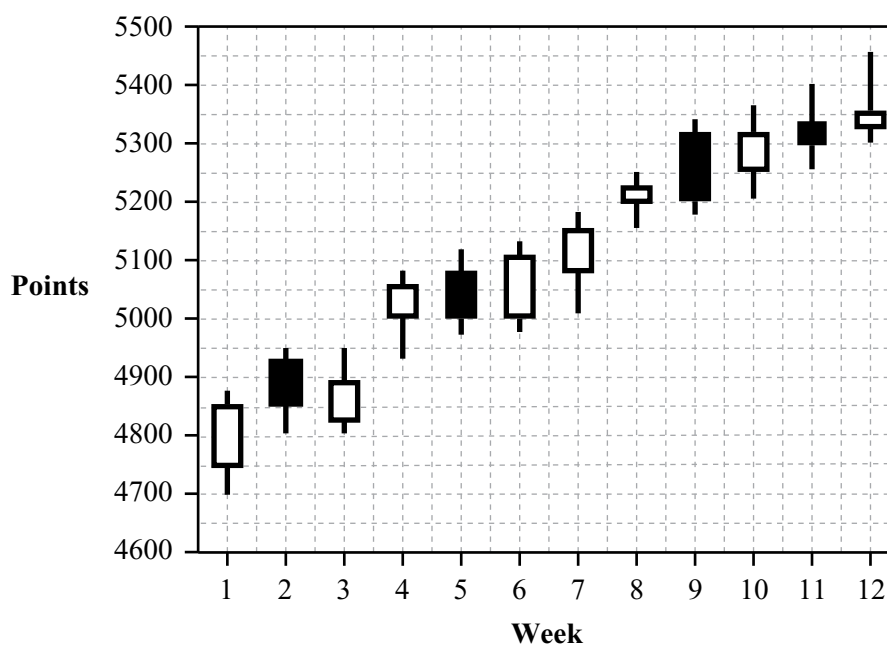
8   Which of the following gives the difference in points between the closing of Week 1 and the opening of Week 4?

   A   150
   B   200
   C   250
   D   300

9 In which of the following weeks did the market **not** close lower than the previous week's closing value?

A	Week 2	**C**	Week 9
B	Week 5	**D**	Week 11

10 The opening points for a week were equal to the closing points of the immediately preceding week in

A	Week 2.	**C**	Week 6.
B	Week 5.	**D**	Week 9.

UNIT 5

Questions 11 and 12

The following passage is from the Discourse on Inequality*, written in 1754 by French philosopher Jean-Jacques Rousseau.*

The first man who, having fenced in a piece of land, said, 'This is mine', and found people naive enough to believe him, that man was the true founder of civil society.

From how many crimes, wars, and murders, from how many horrors and misfortunes might not anyone have saved mankind, by pulling up the stakes, or filling up the ditch, and crying to his fellows: Beware of listening to this impostor; you are undone if you once forget that the fruits of the earth belong to us all, and the earth itself to nobody.

11 Which of the following is the main argument in the passage?

A Over time, humans have destroyed the land through claiming ownership of it.
B The land is the cause of all evil in the world.
C Ownership of land brings us both good fortune and bad.
D Human claims to ownership of land are both indefensible and destructive.

12 Rousseau considers 'civil society' to be

|			
A	essentially uncivil.	**C**	humane and enlightened.
B	trying to improve itself.	**D**	completely beyond redemption.

UNIT 6

Questions 13 – 16

The figure opposite gives the day and night vertical depth profiles (i.e. the number of animals per millilitre (mL) of water present at depths between 0 and 30 m) for four zooplankton species (**I–IV**) in two lakes, 1 and 2, for two 24-hour periods (one in June, the other in September). For each profile, the width at a depth is directly proportional to the number of animals of that species per mL (animals/mL) present at that depth.

Note that in the figures the horizontal scale (animals/mL) is the same for each profile and in the questions 'June' and 'September' refer to the corresponding (typical) 24-hour periods.

13   Which of the following best explains the pattern for species **I** in the two lakes in June?

   A   Each lake had a predator at the surface during the day.
   B   Each lake had a predator at the surface during the night.
   C   During the night, Lake 1 had a predator at the bottom and Lake 2 had a predator at the surface.
   D   During the day, Lake 1 had a predator at the bottom and Lake 2 had a predator at the surface.

14   In June, as the depth increases from 10 m to 15 m, which of the following zooplankton species decreased in abundance during both day and night?

   A   **I** in Lake 1
   B   **I** in Lake 2
   C   **IV** in Lake 1
   D   **IV** in Lake 2

15   In which of the following situations is the number of animals/mL in June closest to equal to the number of animals/mL in September between depths of 10 m and 20 m during the day?

   A   **I** in Lake 1
   B   **III** in Lake 1
   C   **II** in Lake 2
   D   **IV** in Lake 2

16   Suppose there were on average 5000 animals/mL of species **III** present in Lake 1 during the night between a depth of 10 m and 20 m in June.

   Which of the following is the best estimate of the maximum number of animals/mL of species **II** during the day in Lake 1 between a depth of 10 m and 20 m in June?

   A   10 000
   B   15 000
   C   20 000
   D   25 000

Key: ☐ Day ⊡ Night
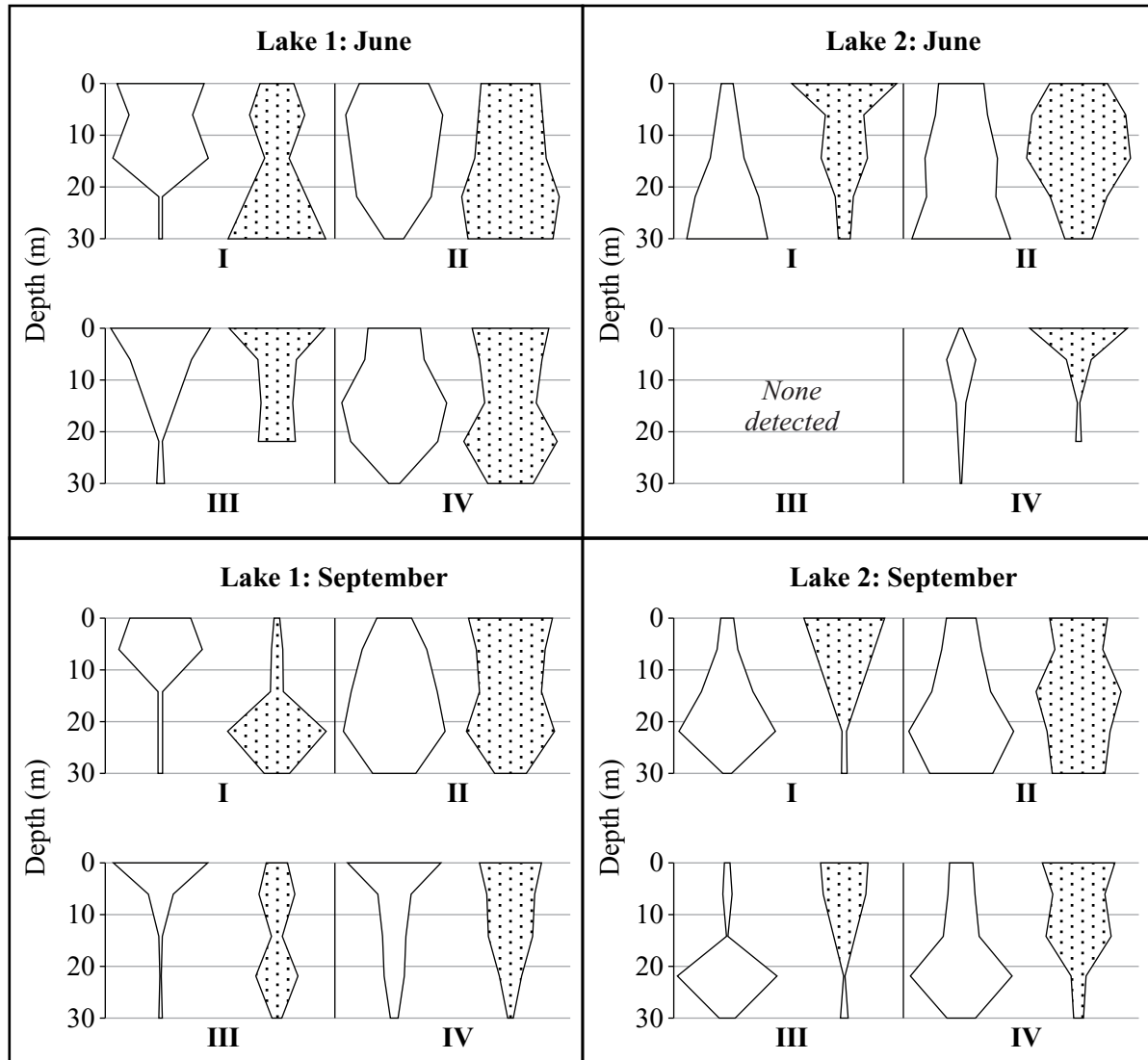
UNIT 7

Questions 17 – 20

The information below reports on demographic data (Population and Consumption) collected for a city between the years 2000 and 2010.
(est): estimation

Table 1: Age structure of population (percent)

	2000	2005	2010	2015 (est)	2020 (est)	2025 (est)
Under 15 yrs old	30.1	28.4	22.9	18.3	17.9	16.2
15–64 yrs old	64.7	65.7	70.7	63.5	61.8	61.4
65 yrs and over	5.2	5.9	6.4	18.2	20.3	22.4
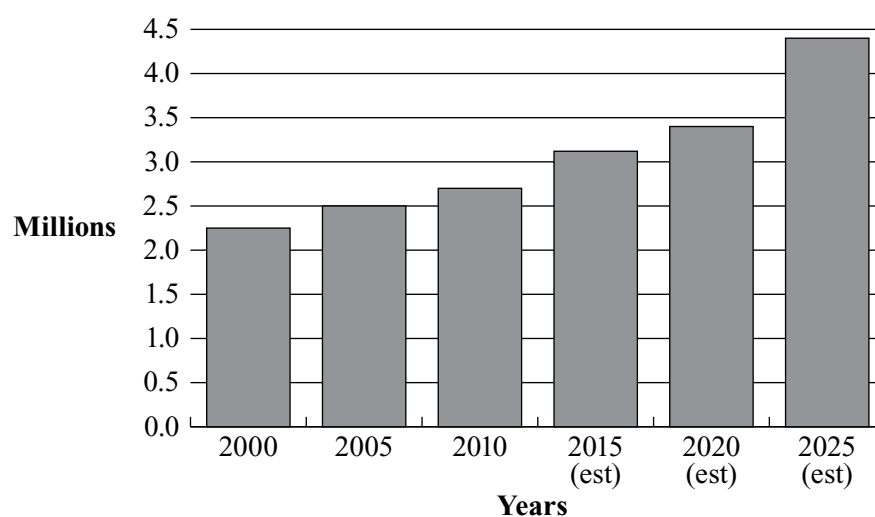
Figure 1: Population
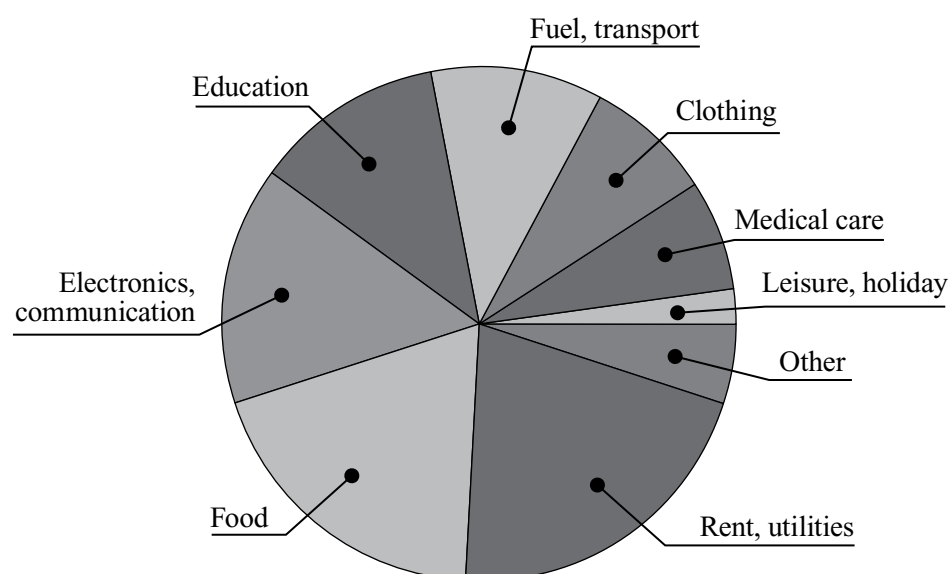
Figure 2: Allocation of household consumption 2010 (percent of total)

17   The data in Table 1 and Figure 1 together imply that

    A   unemployment might increase.
    B   the average cost of living might fall.
    C   the school leaving age might be lowered.
    D   demand for medical care might increase.

For questions 18–20, using only the information provided in Figure 1, Figure 2 and Table 1, answer:

    A   if the statement is clearly supported by the information
    B   if the statement is clearly refuted by the information
    C   if the information is relevant but cannot clearly support or refute the statement
    D   if the statement is not relevant to the information.

18   By 2025 the nature of leisure activities will be very different from 2010.

19   In 2010, an average household spent more on fuel and transport than on food.

20   The government will allocate a higher proportion of the budget to age pension costs by 2025.

UNIT 8

Questions 21 – 24

Bill has 36 coloured lights that form a 6 × 6 grid. The lights (circles) are connected by wires (lines) as shown in Step 0 of the figure below.

The lights flash on (black) or off (white) according to a set of rules, which determine the state of the lights at each subsequent step.

Starting with the initial step, Step 0:

- a light that is **off** will **turn on** in the next step only if **exactly two** of its neighbours* are on.
- a light that is **on** will **stay on** in the next step only if **exactly three** of its neighbours are on.

* Any two lights directly connected by one piece of wire are considered neighbours. A light has, at most, eight neighbours.
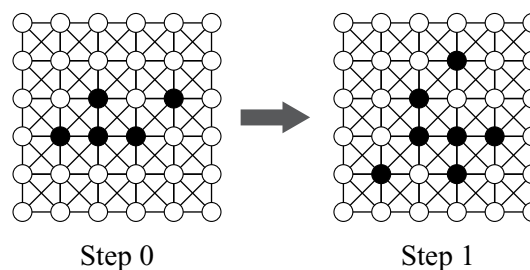

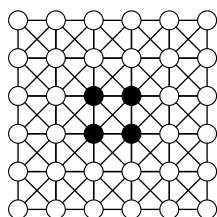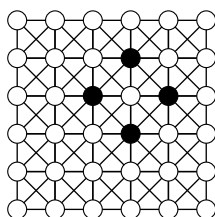
Step 0   Step 1

Figure 1

21 Which one of the following Step 0 arrangements results in no lights being on at Step 1?

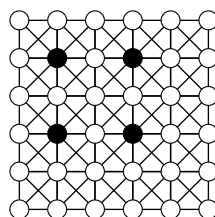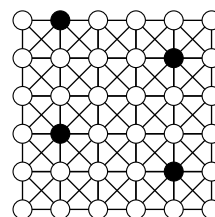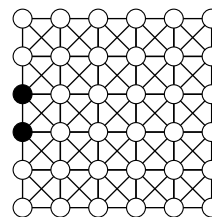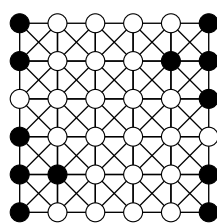| Step 0 | Step 0 | Step 0 | Step 0 |
| **A** | **B** | **C** | **D** |

22 Starting with this Step 0, which is the next step in which the two indicated lights are on again?
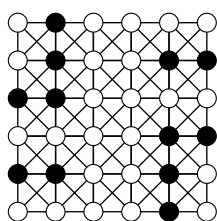

Step 0

   A   Step 1
   B   Step 2
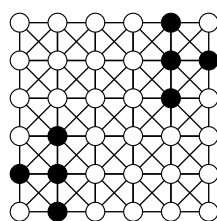   **C**   Step 4
   D   Step 6
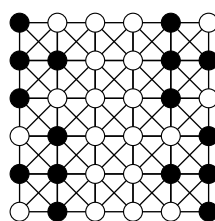
23 Consider this Step 0.

Step 0

Which one of the following shows Step 1?
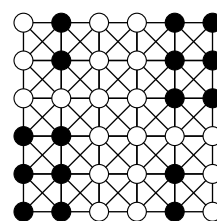
| A | B | C | D |

24 A set of rules different from those above has been applied to produce the following three steps.
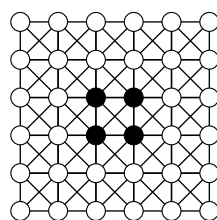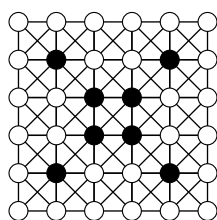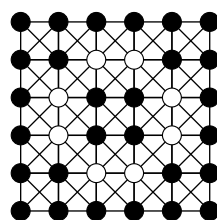
Step 0   Step 1   Step 2

Which one of the following pairs of rules is consistent with these observations?

	A light stays on …	**A light turns on if it has …**
A	if it has at least one neighbour on.	no neighbours on.
B	always.	just one neighbour on.
C	if it has at least one neighbour on.	just two neighbours on.
D	always.	just three neighbours on.

UNIT 9

Questions 25 – 28

The passage below is from a novel set in Melbourne. Lily and her daughter Edith (who wants to become a concert pianist) are going to a concert with Dorcas, a piano teacher. At the concert Margaret Sutherland, a composer and teacher at the university, performs her compositions.

Edith says she's heard some of the girls at school talk about Margaret Sutherland. 'She used to teach at our school. She's very strict.'

'I don't think she suffered fools gladly,' laughs Dorcas. 'And I think just about everyone had to learn the piano. So she would have had some students who didn't do much practice.'   *5*

They buy a program from a university student sitting at a table in the foyer. It seems to be mainly a student audience.

'They've probably been told that they have to attend,' whispers Dorcas as she glances around. 'Let's go in so we can get good seats.' She leads them through the door and down the left-hand aisle. They sit near the front on the left so that they will   *10* have a good view of the pianist's hands.

The first piece is rousing yet slightly discordant. It helps to attune their ears for a concert of new music. Edith seems to be transfixed, whereas the jangling music reminds Lily of the dentist. She tries to concentrate on the music, but it is oppressive. She finds herself looking at the manuscript on the music stand, watching the pages   *15* being turned. Think of Edith, she says to herself. This is a great opportunity for her.

Miss Sutherland's final piece is a lively Bagatelle. The audience claps politely.

'How inspiring!' exclaims Dorcas as they walk out to the foyer. 'Her compositions are so novel. So much stuff composed by locals is derivative – Margaret's is fresh and vigorous. Wait around a bit, I may be able to introduce you. Did you like it, Edith?'   *20*

'I'd love to be able to play like that.'

Just then Miss Sutherland walks into the lobby from a side door wearing a fur stole over her evening dress. She recognises Dorcas, smiles and comes over to them.

'Thank you so much for coming,' she says to Dorcas.

Dorcas introduces Edith and Lily.   *25*

'It was wonderful!' says Dorcas. 'You've obviously achieved so much. How have you managed?'

'Sheer determination! I know what I want to do more than anything else. I'm passionate about composing. I just do it! I teach to earn a living.'

25   When she was teaching at a school, Margaret Sutherland was

   A   keen that all students should have the opportunity to study music.
   B   better at teaching weak students than those who were talented.
   C   impatient with students who were not serious about music.
   D   preoccupied with discipline rather than the music itself.

26   Lily looks at the manuscript (line 15)

   A   to work out how long until the music ends.
   B   because she is interested in the written music.
   C   because she wants Edith to follow her example.
   D   to learn more about Margaret Sutherland's technique.

27   When Dorcas says that local composers' music is 'derivative' (line 19) she most likely means that their music

   A   is tedious and long-winded.
   B   defies the accepted rules of harmony.
   C   is based on Australian rather than international themes.
   D   copies other composers rather than being completely original.

28   Which of the following best sums up the two women's reactions to Margaret Sutherland's music?

	Lily sees it as	Dorcas sees it as
A	tedious and discordant	exciting and vital
B	imposing and dignified	amusing and light-hearted
C	difficult and challenging	harmonious and soothing
D	sonorous and emotional	lightweight and superficial

UNIT 10

Questions 29 – 31

The graphs below present the results of a study of two bird species (**I** and **II**) to determine the relationship between the density of nests (nests per hectare, n/ha) and the density of natural food sources (food sources per hectare, fs/ha), with distance (km) from human settlements in two regions (**X** and **Y**).
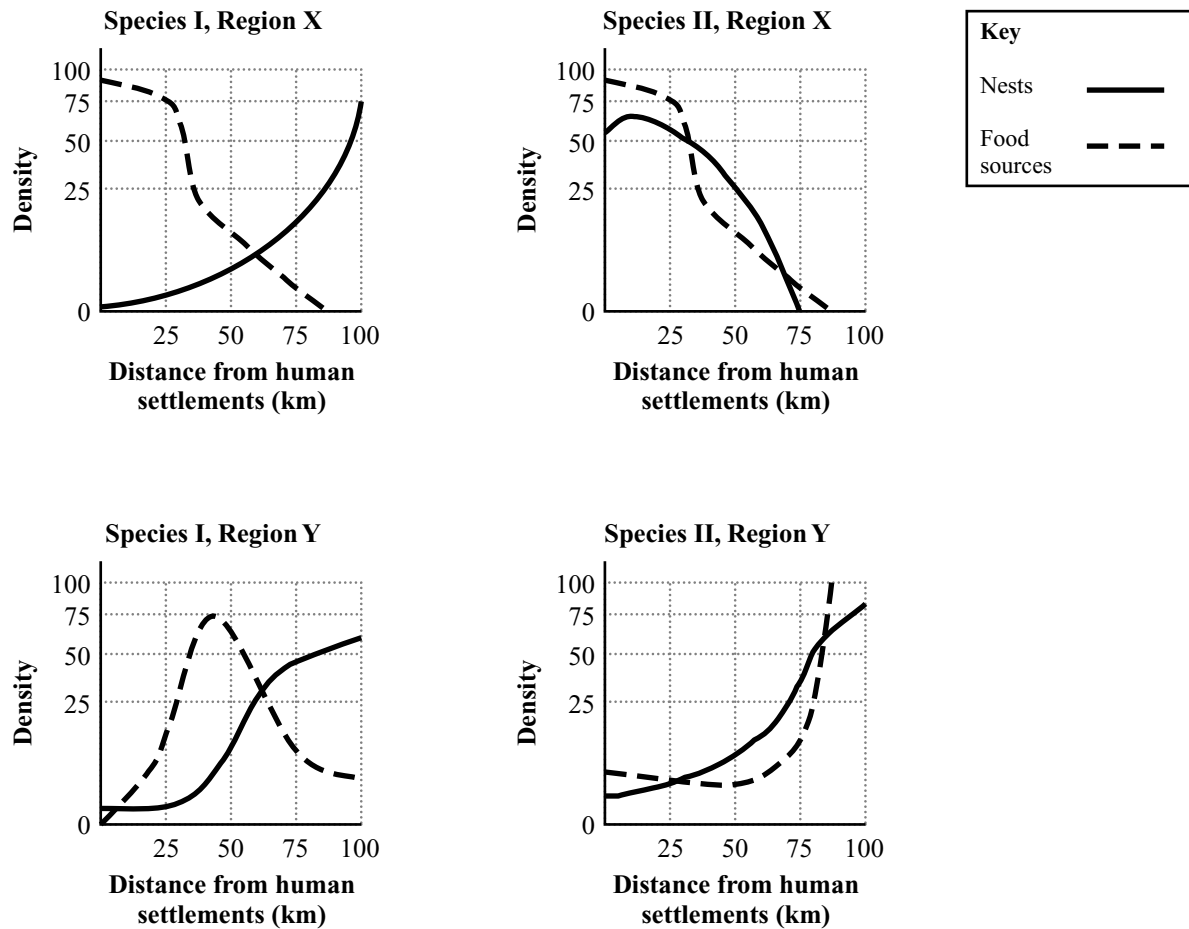
Note that the vertical scales of the graphs are not linear.

29 Which of the following is the best estimate of the density of the food sources of bird species **II** at a distance of 75 km from human settlements in region **Y**?

A 20 fs/ha
B 30 fs/ha
C 40 fs/ha
D 50 fs/ha

30 Which of the following conclusions is best supported?

i Bird species **I** prefers to nest away from human settlements, irrespective of the density of food sources.

ii Bird species **I** prefers to nest close to the highest density of food sources, irrespective of the location of human settlements.

A **i**
B **ii**
C **i** and **ii** equally
D neither **i** nor **ii**

31 Which of the following statements is best supported?

In general, bird species **II** prefers to nest in areas with

A many types of food sources.
B a high density of food sources.
C their most preferred food sources.
D a high density of many types of food sources.

UNIT 11

Questions 32 and 33

The following headings appeared in the media on articles related to the issue of climate change.

I	III
Increased greenhouse gases cause climate change: 97% of climate scientists confirm. *Article UN Newsletter*	So-called climate scientists simply scaremongering about severe weather patterns. *Opinion article by political reporter Newspaper*
II	IV
Global warming? Nonsense, we've never had it so good. *Letter to the editor Newspaper*	Modern human society causes climate change, or does it? *Editorial comment Newspaper*

32 Which article is likely to represent the most personal analysis of the issue of climate change?

  A I
  B II
  C III
  D IV

33 In which article would the following comment most likely appear?

'Scientific consensus about the importance of global warming carries much more weight than the preposterous claims of a handful of dissenting scientists.'

  A I
  B II
  C III
  D IV

UNIT 12

Questions 34 – 37

In an ancient Egyptian number system, fractions were interpreted as either *unit fractions* (in the form $\frac{1}{n}$, where n is any positive integer: 1, 2, 3, …) or as the sum of two or more different unit fractions, in which each different unit fraction was used once only.

In this system, different representations were possible. For example, $\frac{3}{4}$ could be represented by

- $\frac{1}{2} + \frac{1}{4}$, and be written as $\overline{2}\ \overline{4}$, or by

- $\frac{1}{2} + \frac{1}{6} + \frac{1}{12}$, and be written as $\overline{2}\ \overline{6}\ \overline{12}$

34 Which of the following could represent $\frac{3}{5}$?

A $\quad\overline{3}\ \overline{5}$

C $\quad\overline{2}\ \overline{10}$

B $\quad\overline{2}\ \overline{15}$

D $\quad\overline{3}\ \overline{10}$

35 What fraction does $\overline{5}\ \overline{45}$ represent?

A $\quad\frac{2}{9}$

C $\quad\frac{2}{15}$

B $\quad\frac{3}{9}$

D $\quad\frac{3}{15}$

36 Which of the following gives the difference between $\frac{4}{7}$ and $\frac{5}{8}$?

A $\quad\overline{28}\ \overline{56}$

C $\quad\overline{14}\ \overline{56}$

B $\quad\overline{14}\ \overline{28}$

D $\quad\overline{7}\ \overline{56}$

37 Consider the following ancient Egyptian representations:

I $\quad\overline{5}\ \overline{10}\ \overline{80}$

II $\quad\overline{6}\ \overline{8}\ \overline{48}$

Which of them can represent the fraction $\frac{5}{16}$?

A **I** only
B **II** only
C both **I** and **II**
D neither **I** nor **II**

UNIT 13

Question 38

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this material is not supplied.

38 The humour of the cartoon centres on a

    A   disjunction between the setting and the nature of the advice given.
    B   juxtaposition of youthful self-confidence and hard-earned wisdom.
    C   comparison of the enthusiasm of the speaker and the reticence of the recipient.
    D   contrast between the informality of the advice-giver and the formality of the
        opposing team.

UNIT 14

Questions 39 and 40

This rowing boat has seats for four rowers and one *cox*. The cox is responsible for steering the boat and directs the rate of the rowing strokes.

rower 4   rower 2

rower 3   rower 1   cox
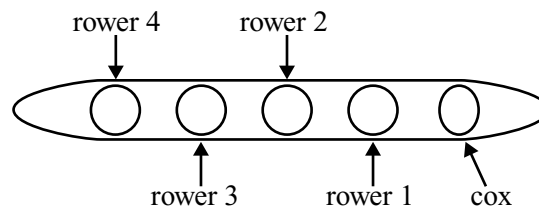
Amy, Cho, Emily, Imani and Jada are in the school rowing team. Unless stated otherwise, each of them can sit in any of the five positions.

39   How many arrangements are possible if Jada is cox and Emily is rower 4?

    A   three
    B   four
    C   five
    D   six

40   How many arrangements are possible if Jada is cox, and Cho and Amy have one rower between them?

    A   two
    B   four
    C   six
    D   eight

UNIT 15

Questions 41 – 44

In order to put a message into code, the 26 letters of the alphabet (in lower case) and ten digits are placed randomly in a 6 × 6 table, as shown.

Each letter or digit in the body of the *code table* can be represented by two bold capital letters: the first from the left-hand column, and the second from the top row of the table. For example, the letter q is represented by the term BE, and the digit 5 is represented by the term WY.

Code table

	B	**E**	**G**	**H**	**W**	**Y**
B	e	q	d	9	t	g
E	a	4	7	l	b	z
G	m	r	v	n	8	w
H	1	h	0	2	6	o
W	i	y	s	c	p	5
Y	k	j	3	u	x	f

NOTE: In the code table, '1' is the digit one and 'l' is the letter L, '0' is the digit zero and 'o' is the letter O.

Suppose Ryan wants to send Kate the following message: *meeting at 4 pm*. He uses the following process to code the message:

Step 1
Ryan uses the table to put his message, which consists of 12 terms, into code.

m	*e*	*e*	*t*	*i*	*n*	*g*	*a*	*t*	*4*	*p*	*m*
GB	BB	BB	BW	WB	GH	BY	EB	BW	EE	WW	GB

Step 2
Ryan uses a four-letter *keyword* (in this case, FORM) and places the coded message into a new four-column grid under the keyword, as shown. He then rearranges the columns so that the letters in the keyword are in alphabetical order.

Keyword grid

F	O	R	M
G	B	B	B
B	B	B	W
W	B	G	H
B	Y	E	B
B	W	E	E
W	W	G	B

rearrangement →

Resultant grid

F	M	O	R
G	B	B	B
B	W	B	B
W	H	B	G
B	B	Y	E
B	E	W	E
W	B	W	G

The resultant coded message is: GB BB BW BB WH BG BB YE BE WE WB WG (12 terms).

Assume Kate has a copy of the original code table and the keyword, and can decode his message.

41 Which of the following keywords would result in the fewest rearrangements of columns in Step 2?

   A   JACK

   B   JOEL

   C   MARK

   D   GARY

42 Wendy uses Ryan's method for coding 18 KING ROAD, with the keyword SHOP.

What will be the fourth term in the resultant coded message?

   A   BW

   B   BY

   C   WB

   D   YB

43 Rachel has coded a word using Ryan's method to give this resultant coded message:

BH BE BH EG.

If the keyword is WORD, what was the original word?

   A   LANE

   B   LEAN

   C   LENA

   D   The keyword could not be any of these.

44 Which of the following keywords would produce the same resultant coded message using Ryan's method?

   A   DAVE and JANE

   B   OWEN and FRED

   C   NORA and RUBY

   D   SAUL and JAKE

UNIT 16

Questions 45 – 47

The Tantrum

Struck with grief you were, though only four,
The day your mother cut her mermaid hair
And stood, a stranger, smiling at the door.
    They frowned, tsk-tsked your wilful, cruel despair,
When you slunk beneath the long piano strings   *5*
And sobbed until your lungs hiccupped for air,
    Unbribable with curses, cake, playthings.
You mourned a mother now herself no more,
But brave and fashionable. The golden rings
    That fringed her naked neck, whom were they for?   *10*
Not you, but for the world, now in your place,
A full eclipse. You wept down on the floor;
    She wept up in her room. They told you this:
That she could grow it back, and just as long,
They told you, lying always about loss,   *15*
For you know she never did. And they were wrong.

Alicia E. Stallings

45 From the child's perspective, what is the loss she experienced?

A her mother's approval
B her own special view of her mother
C the image of her mother as pretty and attractive
D the assumption that her mother will never intentionally hurt her

46 The poem portrays the child's reaction with

A admiration.
B compassion.
C astonishment.
D incomprehension.

47 The last line evokes a sense of

A objective detachment.
B complete despair.
C sad resignation.
D cautious hope.

UNIT 17

Questions 48 – 50

Logs from trees are cut in a sawmill to produce pieces of timber for the building industry.

Consider three cutting machines:

- Machine X produces x pieces of timber every 15 minutes.
- Machine Y produces x pieces of timber every 20 minutes.
- Machine Z produces x pieces of timber every 30 minutes.

Each machine produces pieces of timber at a constant rate.

48 Consider the scenario when all three machines run simultaneously starting at the same time.

Which of the following is the best estimate of the number of pieces of timber produced in one hour?

A $7x$
B $8x$
C $9x$
D There is insufficient information supplied to answer this.

49 On a particular day, all three machines start at 9 am. After 2 hours, a fault causes Machine Y to slow down. From then on Machine Y produces x pieces of timber every 40 minutes.

How many pieces of timber are produced on this day if the sawmill runs until 1 pm?

A $31x$
B $32x$
C $33x$
D $34x$

50 Consider the scenario when just machines X and Z run simultaneously, starting at the same time.

Which of the following is the average time it takes to produce x pieces of timber?

A 7.5 minutes
B 10 minutes
C 12.5 minutes
D There is insufficient information supplied to answer this.

UNIT 18

Questions 51 – 53

The three statements below are concerned with tolerance.

I   I have seen great intolerance shown in support of tolerance.

II It is extraordinarily easy to be tolerant when one has no strong opinions.

III Toleration is good for all, or it is good for none.

51 Statement **I** makes the point that tolerance

    A   is sometimes self-defeating.
    B   is a contradiction in terms.
    C   can sometimes be hypocritical.
    D   can sometimes be inappropriate.

52 Which of the following best expresses the point made by Statement **II**?

    A   People who hold strong opinions cannot be tolerant.
    B   Tolerance can be an excuse for lack of commitment.
    C   It is easier to hold strong opinions than to be tolerant.
    D   It is more important to be tolerant than to hold strong opinions.

**53** Statement **III** claims that tolerance should be characterised by

    A   humility.
    B   consistency.
    C   openness to all viewpoints.
    D   clear-cut and definitive opinions.

UNIT 19

Questions 54 and 55

The operations ☼, ╬, △, ◫ and ₸ shown in **(i)**, **(ii)**, **(iii)**, **(iv)** and **(v)** change the arrangement of shapes in four ways, as indicated. The shapes can:

- combine;
- separate;
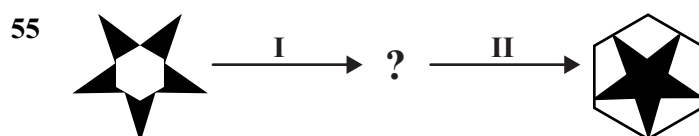- alternate between black and white; and/or
- rotate.

(i)

(ii)

(iii)

(iv)

(v)
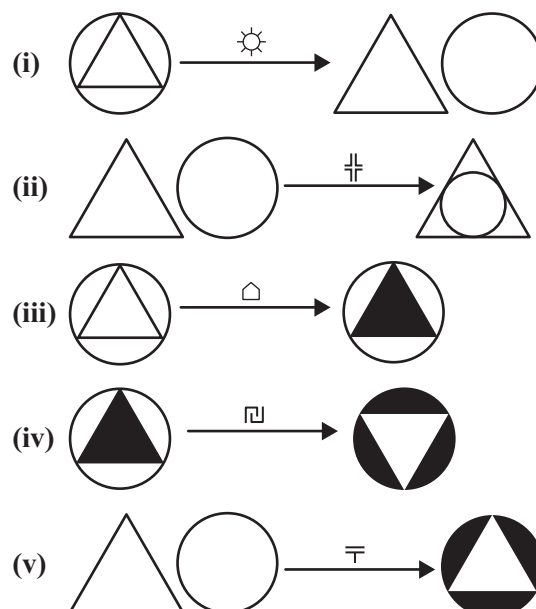
NOTE:
- Multiple operations are worked in order from left to right.
- There are no rotations involved in **(i)**, **(ii)**, **(iii)** and **(v)**.
- Only the inner shape is rotated in **(iv)**.

54
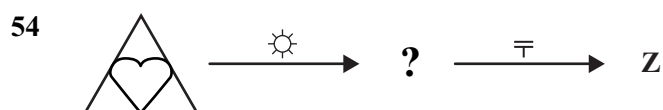
Which of the following is **Z**?

| A | B | C | D |

55

Which of the following operations could be **I** and **II**?

A   **I** = △,   **II** = ◫
B   **I** = ☼,   **II** = ╬
C   **I** = ◫,   **II** = △
D   **I** = ☼,   **II** = ₸

UNIT 20

Questions 56 – 59

The map opposite was drawn in 1916. It shows the area of New York City known as Lower Manhattan.

56 A short time before 1916 new piers were built along South Street (G/H7–9).

According to the evidence in the map, this statement is

A true.

B false.

C possibly true, but cannot be verified.

D not relevant to the material shown on the map.

Question 57 refers to the following additional information.

The area shown in the map was first settled by Europeans in the 17th century. It was a fortified settlement, with guns trained out to sea to protect from invasion. Most of the settlers were devout Christians. Many worked in the fur trade and some of the area was covered by forests.

57 Which of the following names on the map most clearly does **not** refer back to the early occupation of this area?

A Wall Street (D/E/F7)

B Battery Park (C/D/E11–12)

C Beaver Street (D/E/F9)

D Brooklyn Bridge (F2)
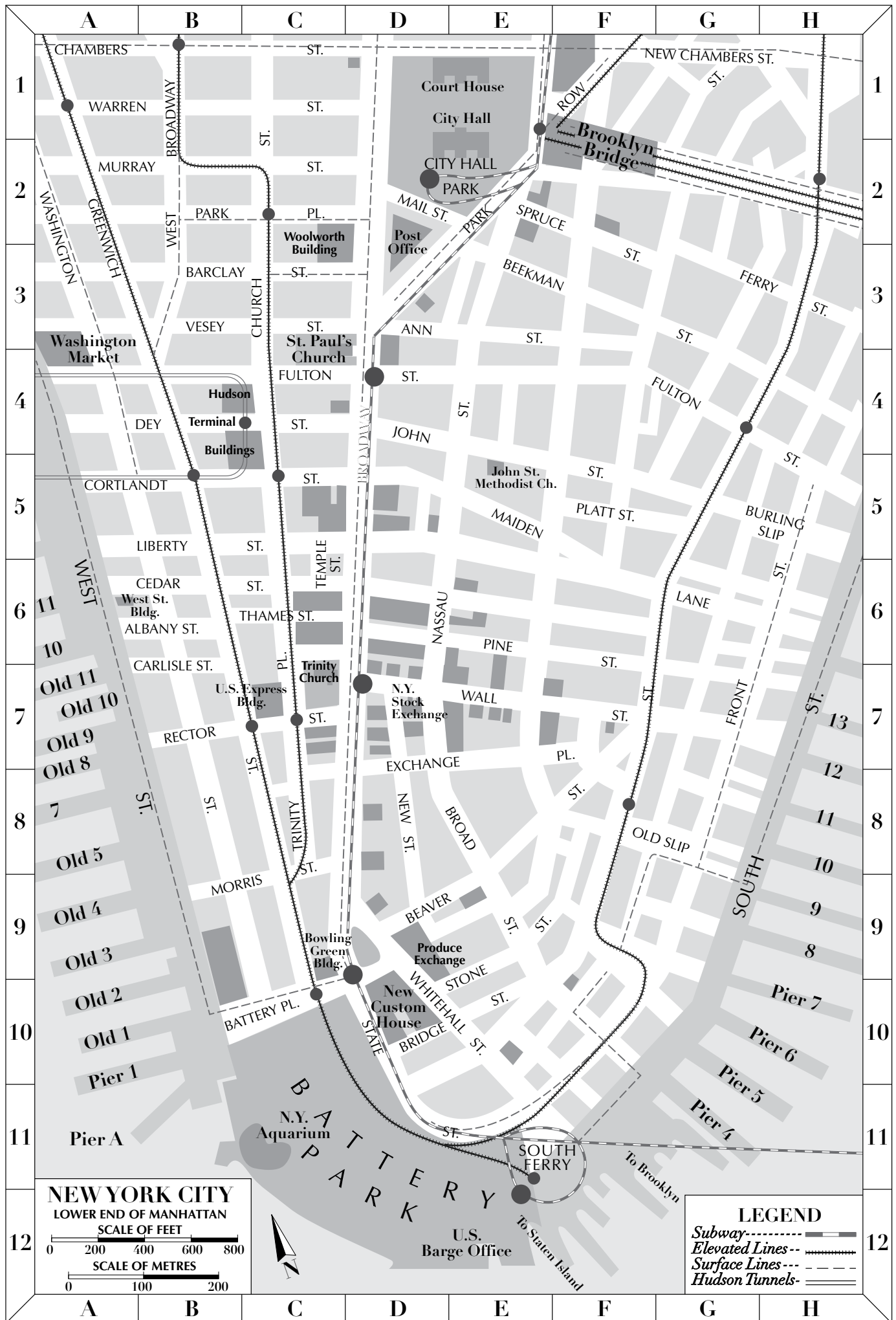
Question 58 refers to the photograph below.

58 Evidence in the photograph suggests that it was taken from

A South Ferry terminal (E/F11).

B Bowling Green Building (C9–10).

C the Hudson Terminal Buildings (B/C4–5).

D the junction of Brooklyn Bridge and Park Row (F1–2).

59 Below are four comments made about New York.

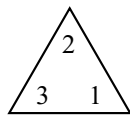Which one expresses an aspect of New York that is reflected in the material in this unit?

A 'No other city is so spitefully incoherent.' (*James Baldwin*)

B 'One belongs to New York instantly, one belongs to it as much in five minutes as in five years.' (*Tom Wolfe*)

C 'New York is made up of millions of different people, and they all come here looking for something.' (*Lindsey Kelk*)

D 'Sometimes, from beyond the skyscrapers, the cry of a tugboat finds you in your insomnia, and you remember that this desert of iron and cement is an island.' (*Albert Camus*)
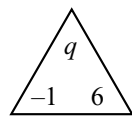
A B C D E F G H

1

CHAMBERS ST. NEW CHAMBERS ST. ST.

WARREN

Court House

City Hall

2

MURRAY

ROW

Brooklyn Bridge

WEST

BROADWAY

GREENWICH

WASHINGTON

PARK PL.

CITY HALL PARK

MAIL ST.

SPRUCE ST.

FERRY

3

BARCLAY ST.

CHURCH

Woolworth Building

Post Office

BEEKMAN ST.

ST.

Washington Market

VESEY

St. Paul's Church

ANN ST.

FULTON

4

Hudson Terminal Buildings

DEY

FULTON ST.

JOHN ST.

ST.

ST.

CORTLANDT ST.

John St. Methodist Ch.

ST.

BURLING SLIP

5

LIBERTY ST.

TEMPLE ST.

MAIDEN

PLATT ST.

ST.

WEST

CEDAR ST.

West St. Bldg.

ALBANY ST.

THAMES ST.

NASSAU

PINE

LANE

6

11
10
Old 11
Old 10
Old 9
Old 8
7

CARLISLE ST.

U.S. Express Bldg.

Trinity Church

N.Y. Stock Exchange

WALL

PL.

FRONT

13

7

RECTOR ST.

TRINITY

BROADWAY

EXCHANGE

ST.

ST.

12

Old 5
Old 4
Old 3
Old 2
Old 1
Pier 1

8

NEW ST.

BROAD

OLD SLIP

11

10

9

MORRIS ST.

Bowling Green Bldg.

BEAVER

Produce Exchange

STONE ST.

SOUTH

9
8

10

BATTERY PL.

New Custom House

WHITEHALL ST.

STATE

BRIDGE ST.

Pier 7

Pier 6

11

Pier A

N.Y. Aquarium

SOUTH FERRY

To Brooklyn

Pier 5

Pier 4

BATTERY PARK

To Staten Island

12

NEW YORK CITY
LOWER END OF MANHATTAN
SCALE OF FEET
0 200 400 600 800

SCALE OF METRES
0 100 200

N

U.S. Barge Office

LEGEND
Subway
Elevated Lines
Surface Lines
Hudson Tunnels

A B C D E F G H

UNIT 21

Questions 60 – 62

Suppose a rule applies whereby:

[triangle with 2 at top, 3 and 1 at bottom] represents $2(x + 3)$, which equals $2x + 6$;
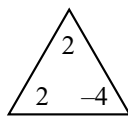
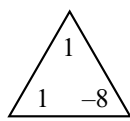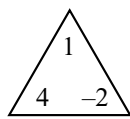[triangle with q at top, –1 and 6 at bottom] represents $q(6x – 1)$, which equals $6qx – q$;

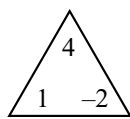and so forth.

NOTE: the rules for multiplying integers are

positive × positive = positive
negative × positive = negative
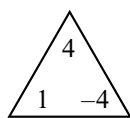positive × negative = negative
negative × negative = positive

60

[triangle with 2 at top, 2 and –4 at bottom] is equal to

A [triangle with 1 at top, 1 and –8 at bottom]

B [triangle with 1 at top, 4 and –2 at bottom]

C [triangle with 4 at top, 1 and –2 at bottom]

D [triangle with 4 at top, 1 and –4 at bottom]

61

A triangle with 2 at top, 1 and 1 at bottom + triangle with 4 at top, 2 and 1 at bottom =

A triangle: 6 (top), 3, 2

C triangle: 6 (top), 10, 1

B triangle: 2 (top), 10, 3

D triangle: 2 (top), 5, 3

62 Which of the following is equivalent to $x^2 - 3x + 5 = 0$?

A triangle: x (top), 2, 1 = triangle: 5 (top), −1, 1

B triangle: x (top), 2, 1 = triangle: 5 (top), 1, −1

C triangle: 1 (top), 2, x = triangle: 5 (top), −1, 1

D triangle: 1 (top), 2, x = triangle: 5 (top), 1, −1

UNIT 22

Question 63

Piano

Her wattled[1] fingers can't
stroke the keys with much
grace or assurance anymore,
and the tempo is always
rubato[2], halting, but still   *5*
that sound – notes quivering
and clear in their singularity,
filing down the hallway –
aches with pure intention, the
melody somehow prettier   *10*
as a remnant than
whatever it used to be.

Dan Howell

[1] *wattled*: with loose, ageing skin
[2] *rubato*: played with varying speed, usually for expressive purposes

63   For the poet, artistic beauty

    A   outlasts the decline of technical ability.
    B   eventually becomes only a sad echo of itself.
    C   is to be admired chiefly for what it once was.
    D   is in the musical composition, rather than in the musician.

UNIT 23

Questions 64 – 66

The following passage is from a book about friendship.

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64 'There is something so admirably cool and antiseptic about Shane' (lines 3 and 4).

In the context of the passage as a whole, this statement suggests an attitude towards Shane that is

A condemnatory.
B somewhat sarcastic.
C completely approving.
D verging on empathetic.

65 The main point made in line 10 is that

A relationships can be extremely destructive.
B we cannot exist without relationships with others.
C we are capable of existing without relationships if necessary.
D our deepest desire is to exist without relationships with others.

66 Which of the following best matches the meaning of 'cool and antiseptic' as it is used in line 4?

A malicious
B detached
C harmless
D callous

UNIT 24

Questions 67 – 70

The following passage is from an essay about artists who have influenced the author.
The paintings he mentions are shown on the facing page.

The one who completely captivated me as a child was Raoul DufyWhat still appeals
to me about Dufy is the way life was not imitated but evoked in my mind by planes
of strong colour forced into patterns, almost against their will, by black or dark-
coloured lines, often drawn as if in haste, impressionistically. It was almost as if the
real subject of some of these canvases was the very experience of rhythm and colour $\qquad$ *5*
– as in Dufy's *Red Concert*, an explosion of deep red light – which he then scribbled
over in order to observe the conventions. In other words, the Dufy paintings I loved
were nothing more than brightly coloured, articulated spaces, vaguely evocative of
real mornings or afternoons in real places, for which I could   f ll in the detail in
my mind. $\qquad$ *10*
   The jockey and top-hatted racegoers in   *Race Track* and the conductor and
musicians in *Red Concert* are little more than splodges of colour escaping black
outlines. In fact, some of the racegoers strike you as nothing more than patches of
green turf turned as an afterthought into cartoons of human   f gures; two arms, two
legs, a torso and a child's sketch of a human face, that's all. Yet I am at Ascot – or is $\qquad$ *15*
it Longchamp?[1] – on race day; I can almost smell the horse sweat and the sun on the
grass; and although I don't know what they're playing at the red concert, I can hear
Shostakovich[2] loud and clear. Dufy makes me an artist.

[1] *Ascot and Longchamp*: famous racecourses
[2] *Shostakovich*: famous Russian composer

<div align="right">Source:Robert Dessaix, As I was Saying, Vintage, Australia, 2012</div>

67   The author says that *Red Concert* is: 'an explosion of deep red light – which he then
scribbled over in order to observe the conventions' (lines 6 and 7).

This suggests that Dufy painted

A   aimlessly.   **C**   in a painstaking manner.
B   with passion.   **D**   in a conventional manner.

68   The author says that 'Dufy makes me an artist' (line 18) because he

A   now wants to take up painting.
B   now appreciates how exhilarating it is to paint.
C   has become lost in the memories of past experiences.
D   is compelled to view the artwork actively rather than passively.

69   Which of the following descriptions of *Red Concert* and *Race Track* are most consistent
with the author's point of view?

A   dynamic and vibrant   **C**   melodramatic and daring
B   formal and organised   **D**   abstract and haphazard

70 Dufy's style of painting received a great deal of critical comment.

Which of the following quotations is most consistent with the author's point of view about Dufy's work?

A 'does not correspond to some inner or essential truths'
B 'clarity of line but aggressive use of colour'
C 'joyous lack of inhibition'
D 'disturbed complacency'

Red Concert

Race Track

State Government
Victoria