

Answer Key & Explanations

Academic Reading Paper 47 — Bar Codes, Trees and Certainty

Mark your answer sheet before you read this

HOW TO USE THIS

- Mark one point for each correct answer. Spelling must be correct.
- Convert your total with the band table on the next page.
- Then read the explanation for **every** question you got wrong, and for every one you guessed. The explanation names the mechanism the wrong answer was built on.

The band figure is an estimate. A real paper is pre-tested on thousands of candidates and these have not been, so read the band as a position, not a prediction.

Q	Answer	Code	Mechanism	Where
1	Morse	E1	Synonym substitution, passage keyword parked on a decoy	Paragraph 2.
2	circles	R	Straight retrieval — no trap	Paragraph 2.
3	photomultiplier	E2	Answer sits after its own distractor	Paragraph 3.
4	fifteen thousand / 15,000 / 15000	A1	Quantity re-attached to another noun	Paragraph 3.
5	chewing gum / gum	F2	Word limit decides which words are the answer	Paragraph 7.
6	TRUE	E1	Synonym substitution, passage keyword parked on a decoy	Paragraph 3.
7	FALSE	D1	Statement moved from another paragraph	Paragraphs 2 and 6.
8	NOT GIVEN	R	Straight retrieval — no trap	Paragraph 6.
9	TRUE	E1	Synonym substitution, passage keyword parked on a decoy	Paragraph 7.
10	laser	R	Straight retrieval — no trap	Paragraph 4.
11	integrated	F3	Grammatical fit — tense, number, comparative	Paragraph 4.
12	committee	R	Straight retrieval — no trap	Paragraph 6.
13	computer	R	Straight retrieval — no trap	Paragraph 8.
14	ix	E4	Minimal-pair options	Paragraph A.
15	i	E4	Minimal-pair options	Paragraph B.
16	iii	E4	Minimal-pair options	Paragraph C.
17	v	E4	Minimal-pair options	Paragraph D.
18	vi	E4	Minimal-pair options	Paragraph E.
19	vii	E4	Minimal-pair options	Paragraph F.
20	viii	E4	Minimal-pair options	Paragraph G.

Q	Answer	Code	Mechanism	Where
21	absent	E2	Answer sits after its own distractor	Paragraph B.
22	10.3	A1	Quantity re-attached to another noun	Paragraph C.
23	attract	R	Straight retrieval — no trap	Paragraph D.
24	negative	R	Straight retrieval — no trap	Paragraph D.
25	ultrasonic	R	Straight retrieval — no trap	Paragraph E.
26	sap	R	Straight retrieval — no trap	Paragraph E.
27	B	B2	Adjacent proposition on the same subject	Paragraph 2.
28	B	D1	Statement moved from another paragraph	Paragraph 4.
29	B	A2	Scope widened or narrowed by dropping a qualifier	Paragraph 5.
30	B	C2	The extreme version the writer explicitly refused	Paragraph 6.
31	YES	R	Straight retrieval — no trap	Paragraph 3.
32	NO	C1	Overstatement — hedge removed	Paragraph 7.
33	NOT GIVEN	R	Straight retrieval — no trap	Paragraph 2.
34	YES	R	Straight retrieval — no trap	Paragraph 6.
35	NO	C2	The extreme version the writer explicitly refused	Paragraph 7.
36	NOT GIVEN	R	Straight retrieval — no trap	Paragraph 4.
37	A	E4	Minimal-pair options	Paragraph 3.
38	B	E4	Minimal-pair options	Paragraph 3.
39	C	E4	Minimal-pair options	Paragraph 8.
40	D	E4	Minimal-pair options	Paragraph 8.

Score to band

Raw score out of 40	Estimated band
39–40	9
37–38	8.5
35–36	8
33–34	7.5
30–32	7
27–29	6.5
23–26	6
19–22	5.5
15–18	5
13–14	4.5
10–12	4
8–9	3.5
6–7	3
4–5	2.5

Questions 1–5**1 Morse** · Paragraph 2.

'He knew **Morse** code from his time in the Boy Scouts, and sitting in the sand he drew a row of dots and dashes.' The question compresses two clauses into one, so the word you need sits in the half that mentions the Scouts rather than the half that mentions the sand.

Mechanism E1 — Synonym substitution, passage keyword parked on a decoy

2 circles · Paragraph 2.

'he bent the pattern into a set of concentric **circles**'.

Mechanism R — Straight retrieval — no trap

3 photomultiplier · Paragraph 3.

'a **photomultiplier** tube taken from a cinema sound system'. The bulb is named first in the same sentence and the question hands it to you, which puts the words you are matching on in front of the answer.

Mechanism E2 — Answer sits after its own distractor

4 fifteen thousand / 15,000 / 15000 · Paragraph 3.

'In 1962 the patent was sold for **fifteen thousand** dollars, and it expired in 1969.' Three figures sit in that sentence and two of them are years.

Mechanism A1 — Quantity re-attached to another noun

5 chewing gum / gum · Paragraph 7.

'The item was a packet of **chewing gum**, and it was chosen deliberately.' Two words is the limit and the phrase is exactly two.

Mechanism F2 — Word limit decides which words are the answer

Questions 6–9**6 TRUE** · Paragraph 3.

'it expired in 1969 without a single commercial use'. *Ran out for expired, ever having been used for a single use.*

Mechanism E1 — Synonym substitution, passage keyword parked on a decoy

7 FALSE · Paragraphs 2 and 6.

Being readable from any direction was the reason the bullseye was drawn that way in the first place. It lost because 'printing presses smear ink slightly in the direction the paper travels'. The statement takes a fact from paragraph 2 and offers it as the reason given in paragraph 6.

Mechanism D1 — Statement moved from another paragraph

8 **NOT GIVEN** · Paragraph 6.

The passage says a body drawn from the American grocery trade considered competing designs and names the winner. Where the competing designs came from is not stated.

Mechanism R — Straight retrieval — no trap

9 **TRUE** · Paragraph 7.

'By 1978 well under one store in a hundred in the United States had a scanner.'

Mechanism E1 — Synonym substitution, passage keyword parked on a decoy

Questions 10–13

10 **laser** · Paragraph 4.

'The **laser** was demonstrated in 1960 and gave a narrow beam of steady light.'

Mechanism R — Straight retrieval — no trap

11 **integrated** · Paragraph 4.

'The **integrated** circuit made it possible to decode a signal at the counter rather than in a back room.' The slot needs the adjective, not the noun.

Mechanism F3 — Grammatical fit — tense, number, comparative

12 **committee** · Paragraph 6.

'It was settled by **committee** ... a body drawn from the American grocery trade considered the competing designs and chose a single one.'

Mechanism R — Straight retrieval — no trap

13 **computer** · Paragraph 8.

'the price sits in the shop's own **computer**'.

Mechanism R — Straight retrieval — no trap

Questions 14–20

14 ix · Paragraph A.

'A coastal redwood may stand a hundred metres high, and every day it moves several hundred litres of water ... with no pump anywhere in the system.'

Mechanism E4 — Minimal-pair options

15 i · Paragraph B.

'He also showed that the force was nowhere near enough.' Option ii is the same sentence with the verdict reversed, and it is placed beside i for that reason.

Mechanism E4 — Minimal-pair options

16 iii · Paragraph C.

'The figure is not an engineering limit that better equipment might beat; it follows from the weight of the atmosphere.' That sentence exists to rule out option iv.

Mechanism E4 — Minimal-pair options

17 v · Paragraph D.

'The column is therefore not compressed but stretched.' x is tempting because this paragraph talks about narrow tubes, but it says nothing about how they are built.

Mechanism E4 — Minimal-pair options

18 vi · Paragraph E.

'Trees survive because the plumbing is divided into a very large number of separate narrow vessels rather than a few wide ones.'

Mechanism E4 — Minimal-pair options

19 vii · Paragraph F.

'the instrument that solved it is disarmingly simple ... The device is portable, costs little.'

Mechanism E4 — Minimal-pair options

20 viii · Paragraph G.

'The first is about language: the description most people are taught ... The second is that the account is not finished.'

Mechanism E4 — Minimal-pair options

Questions 21–26

21 absent · Paragraph B.

'Root pressure can raise water a few metres in some species and is **absent** altogether in others, including tall ones in full leaf.' The first half of that sentence gives a distance, which is what a reader scanning for the answer meets first.

Mechanism E2 — Answer sits after its own distractor

22 **10.3** · Paragraph C.

'a column of water about **10.3** metres high, and not one centimetre more'. Two other figures stand in the same paragraph, one of them the height of the tree and one the shortfall.

Mechanism A1 — Quantity re-attached to another noun

23 **attract** · Paragraph D.

'Water molecules **attract** one another, and in a tube narrow enough the column holds together as a single thread.'

Mechanism R — Straight retrieval — no trap

24 **negative** · Paragraph D.

'the water in a tall tree is under **negative** pressure, commonly between one and two megapascals below zero'.

Mechanism R — Straight retrieval — no trap

25 **ultrasonic** · Paragraph E.

'the breakages can be detected as sharp clicks in the **ultrasonic** range'.

Mechanism R — Straight retrieval — no trap

26 **sap** · Paragraph F.

'gas pressure inside the chamber is raised until **sap** appears at the cut surface'.

Mechanism R — Straight retrieval — no trap

Questions 27–30

27 B · Paragraph 2.

'Confidence expressed at the moment of the first identification ... does carry real information ... Confidence expressed in a courtroom months later carries very little.' C sits one step from the passage's own words, which are that the confidence grew and the accuracy did not.

Mechanism B2 — Adjacent proposition on the same subject

28 B · Paragraph 4.

'A weather forecaster who says seventy per cent finds out, every day, and can be scored over a season.' The three wrong options each supply an explanation the passage never offers, and the paragraph rules out the first of them directly: 'The difference between these people is not intelligence or honesty.'

Mechanism D1 — Statement moved from another paragraph

29 B · Paragraph 5.

'this holds when the group has been told that the confident member is not the most accurate'. C is a claim about groups in general that the passage neither makes nor needs.

Mechanism A2 — Scope widened or narrowed by dropping a qualifier

30 B · Paragraph 6.

'Within one well-calibrated person, confidence is one of the most useful signals available.' A and D are the two overstated positions the paragraph is written to sit between.

Mechanism C2 — The extreme version the writer explicitly refused

Questions 31–36

31 YES · Paragraph 3.

'It tells you how strongly the evidence available to that person seems to them to point in one direction, which is genuine information about them and only indirectly about the world.'

Mechanism R — Straight retrieval — no trap

32 NO · Paragraph 7.

'Somebody can be entirely honest, entirely experienced, and systematically overconfident, because nothing in their working life has ever told them otherwise.'

Mechanism C1 — Overstatement — hedge removed

33 NOT GIVEN · Paragraph 2.

The courtroom appears as the setting in which the distinction matters. What should be done about it there, and who should be informed, is never raised.

Mechanism R — Straight retrieval — no trap

34 **YES** · Paragraph 6.

'it is also unusable, since no organisation can operate by ignoring what its most experienced people say about how sure they are'.

Mechanism R — Straight retrieval — no trap

35 **NO** · Paragraph 7.

'both treat confidence as a fixed quantity with a fixed value. It is not.'

Mechanism C2 — The extreme version the writer explicitly refused

36 **NOT GIVEN** · Paragraph 4.

Several professions are compared, but on whether the world answers them back, never on how freely they express certainty.

Mechanism R — Straight retrieval — no trap

Questions 37–40

37 **A** · Paragraph 3.

'Confidence is a report on an internal **state**.' E is what the passage calls confidence elsewhere, and it is not the word this sentence uses.

Mechanism E4 — Minimal-pair options

38 **B** · Paragraph 3.

'whether that person has ever been in a position to find out how often their strong feelings were correct'.

Mechanism E4 — Minimal-pair options

39 **C** · Paragraph 8.

'how often have you been wrong about this kind of thing before'.

Mechanism E4 — Minimal-pair options

40 **D** · Paragraph 8.

'usually with specifics and without discomfort, because the answers are simply things they know about themselves'.

Mechanism E4 — Minimal-pair options