

Answer Key & Explanations

Academic Reading Paper 48 — Firemarks, Neutrinos and Second Opinions

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	churches	E2	Answer sits after its own distractor	Paragraph 1.
2	physician	E1	Synonym substitution, passage keyword parked on a decoy	Paragraph 2.
3	inside	E1	Synonym substitution, passage keyword parked on a decoy	Paragraph 5.
4	wall	R	Straight retrieval — no trap	Paragraph 6.
5	rates	R	Straight retrieval — no trap	Paragraph 7.
6	FALSE	C2	The extreme version the writer explicitly refused	Paragraph 4.
7	TRUE	R	Straight retrieval — no trap	Paragraph 4.
8	NOT GIVEN	R	Straight retrieval — no trap	Paragraph 2.
9	TRUE	R	Straight retrieval — no trap	Paragraph 5.
10	B	D1	Statement moved from another paragraph	Paragraph 4.
11	B	B4	Cause supplied by the reader	Paragraph 4.
12	B	C2	The extreme version the writer explicitly refused	Paragraph 7.
13	B	D1	Statement moved from another paragraph	Paragraph 8.
14	expected	E2	Answer sits after its own distractor	Paragraph 1.
15	anything	R	Straight retrieval — no trap	Paragraph 2.
16	light-years / lightyears	R	Straight retrieval — no trap	Paragraph 3.
17	neutron	E2	Answer sits after its own distractor	Paragraph 4.
18	varieties	F3	Grammatical fit — tense, number, comparative	Paragraph 6.
19	A	R	Straight retrieval — no trap	Paragraph 2.
20	B	R	Straight retrieval — no trap	Paragraph 3.

Q	Answer	Code	Mechanism	Where
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21	C	E1	Synonym substitution, passage keyword parked on a decoy	Paragraph 4.
22	D	E1	Synonym substitution, passage keyword parked on a decoy	Paragraph 5.
23	D	R	Straight retrieval — no trap	Paragraph 1.
24	A	B4	Cause supplied by the reader	Paragraph 4.
25	C	D1	Statement moved from another paragraph	Paragraph 6.
26	B	B1	Relation swap	Paragraph 7.
27	NO	C2	The extreme version the writer explicitly refused	Paragraph H.
28	YES	R	Straight retrieval — no trap	Paragraph E.
29	NOT GIVEN	R	Straight retrieval — no trap	Paragraph G.
30	YES	A2	Scope widened or narrowed by dropping a qualifier	Paragraph C.
31	NO	B2	Adjacent proposition on the same subject	Paragraph B.
32	NOT GIVEN	R	Straight retrieval — no trap	Paragraphs C and D.
33	independent	F3	Grammatical fit — tense, number, comparative	Paragraph A.
34	anchoring	R	Straight retrieval — no trap	Paragraph C.
35	conclude	R	Straight retrieval — no trap	Paragraph F.
36	reading	F2	Word limit decides which words are the answer	Paragraph G.
37	D	F1	Answers out of order + repeats allowed	Paragraph D.
38	F	F1	Answers out of order + repeats allowed	Paragraph F.
39	H	F1	Answers out of order + repeats allowed	Paragraph H.
40	G	F1	Answers out of order + repeats allowed	Paragraph G.

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 **churches** · Paragraph 1.

'something in the region of thirteen thousand houses and eighty-seven parish **churches**'. The question hands you the houses, which come first in the sentence, so the phrase you match on stands before the answer.

Mechanism E2 — Answer sits after its own distractor

2 **physician** · Paragraph 2.

'Nicholas Barbon, a **physician** who had given up medicine for speculative building'. *Formerly* stands for the whole clause about giving it up.

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

3 **inside** · Paragraph 5.

'firefighters should go **inside** a burning building and attack the fire where it was, rather than direct water at it from the street'.

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

4 **wall** · Paragraph 6.

'crushed by a falling **wall**'.

Mechanism R — Straight retrieval — no trap

5 **rates** · Paragraph 7.

'to be funded from local **rates**, from a levy on the insurance companies themselves and from a government contribution'.

Mechanism R — Straight retrieval — no trap

Questions 6–9

6 **FALSE** · Paragraph 4.

'The story everybody knows about those marks ... It is largely a Victorian invention.' The passage states the belief in order to take it apart, which is what makes it a comfortable thing to agree with.

Mechanism C2 — The extreme version the writer explicitly refused

7 **TRUE** · Paragraph 4.

'An office with a dozen insured houses in a street had every reason to fight a blaze in an uninsured one standing between them.'

Mechanism R — Straight retrieval — no trap

8 **NOT GIVEN** · Paragraph 2.

The passage says competitors appeared within a few years and that each office employed men with engines. The size of any office's staff, and how the offices compared, is never given.

Mechanism R — Straight retrieval — no trap

9 TRUE · Paragraph 5.

'He trained his men in a systematic way, selected them young and fit.'

Mechanism R — Straight retrieval — no trap

Questions 10–13

10 B · Paragraph 4.

'The marks served mainly to identify a building and to advertise the company.' A is the belief the same paragraph exists to dismantle, and it is the answer most readers arrive with.

Mechanism D1 — Statement moved from another paragraph

11 B · Paragraph 4.

'Fire spreads. An office with a dozen insured houses in a street had every reason to fight a blaze in an uninsured one standing between them.' C is contradicted two sentences later, where the passage says no brigade owed a duty to any building.

Mechanism B4 — Cause supplied by the reader

12 B · Paragraph 7.

'not because anybody had concluded that protection from fire was a duty of the state, but because the private parties who had been providing it declined to continue'. A is the half of that sentence the passage rules out.

Mechanism C2 — The extreme version the writer explicitly refused

13 B · Paragraph 8.

'The same argument is being conducted at present about flooding, and about insurance against attacks on computer systems, in almost the same words.' C and D are each assembled from details that appear earlier in the passage.

Mechanism D1 — Statement moved from another paragraph

Questions 14–18

14 **expected** · Paragraph 1.

'spread all the way from almost nothing up to the **expected** value'. The other end of that range is named first and is the phrase a quick scan settles on.

Mechanism E2 — Answer sits after its own distractor

15 **anything** · Paragraph 2.

'so reluctant to interact with matter that it would pass through **anything**'.

Mechanism R — Straight retrieval — no trap

16 **light-years** / **lightyears** · Paragraph 3.

'the average distance such a particle would travel through solid matter before doing anything at all came out in **light-years**'.

Mechanism R — Straight retrieval — no trap

17 **neutron** · Paragraph 4.

'a flash as a positron annihilated, and then ... a second flash as a **neutron** was captured by a cadmium nucleus'. The question gives you the first of the pair, so the word you match on comes before the answer.

Mechanism E2 — Answer sits after its own distractor

18 **varieties** · Paragraph 6.

'built to detect all three known **varieties** of the particle'. The plural is fixed by *all three*.

Mechanism F3 — Grammatical fit — tense, number, comparative

Questions 19–22

19 **A** · Paragraph 2.

'Pauli described his own suggestion as a desperate remedy.'

Mechanism R — Straight retrieval — no trap

20 **B** · Paragraph 3.

'Enrico Fermi gave the idea a mathematical form in 1934 and supplied the name by which the particle is now known.'

Mechanism R — Straight retrieval — no trap

21 **C** · Paragraph 4.

'by accepting the tiny probability and compensating with an enormous supply. A nuclear reactor produces these particles in vast numbers.'

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

22 D · Paragraph 5.

'Davis then extracted and counted those argon atoms, a few dozen at a time, from a tank the size of a house.'

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

Questions 23–26

23 D · Paragraph 1.

'Niels Bohr was willing to consider giving up the conservation of energy in the very small'.

Mechanism R — Straight retrieval — no trap

24 A · Paragraph 4.

'Nothing in the background produces that pair with that spacing.' The reason is stated as a single sentence, and everything else in the paragraph is apparatus.

Mechanism B4 — Cause supplied by the reader

25 C · Paragraph 6.

'the shortfall was blamed either on Davis's technique or on the models of the Sun, and both were examined repeatedly and both survived.' G is assembled from the paragraph that describes the tank, and F is the resolution the passage rejects: the Sun was producing exactly what the models said.

Mechanism D1 — Statement moved from another paragraph

26 B · Paragraph 7.

'Changing variety is only possible for a particle that has mass, and the standard theory of particle physics had assumed this one had none.' The relation runs one way: the mass is what the change proves, not what allows the theory to stand.

Mechanism B1 — Relation swap

Questions 27–32

27 NO · Paragraph H.

'None of this makes a dependent second opinion worthless. It still catches outright mistakes ... and an organisation with two pairs of eyes is better off than one with a single pair.'

Mechanism C2 — The extreme version the writer explicitly refused

28 YES · Paragraph E.

'A second doctor deliberately kept away from the history will order tests that have already been done, may miss something the first one found.'

Mechanism R — Straight retrieval — no trap

29 NOT GIVEN · Paragraph G.

The passage reports that it is standard practice in several countries and describes it approvingly. Whether it should be required, and by whom, is not raised.

Mechanism R — Straight retrieval — no trap

30 YES · Paragraph C.

'the movement happens in people who know about the effect, have been warned about it that morning, and are actively trying to resist'.

Mechanism A2 — Scope widened or narrowed by dropping a qualifier

31 NO · Paragraph B.

'Each of these arrangements is sensible when considered on its own, and saves time ... the removal is invisible because nothing appears to have gone wrong.' The passage says the opposite of careless, and locates the problem in the invisibility.

Mechanism B2 — Adjacent proposition on the same subject

32 NOT GIVEN · Paragraphs C and D.

Both appear as illustrations of the same mechanism. They are never set against each other.

Mechanism R — Straight retrieval — no trap

Questions 33–36

33 independent · Paragraph A.

'the two judgements have to be **independent**'. The slot needs the adjective; the passage also uses the noun a line later, and that form will not fit here.

Mechanism F3 — Grammatical fit — tense, number, comparative

34 anchoring · Paragraph C.

'The mechanism is **anchoring**, and it is not a matter of weak character.'

Mechanism R — Straight retrieval — no trap

35 **conclude** · Paragraph F.

'And there is information that tells them what to **conclude**.'

Mechanism R — Straight retrieval — no trap

36 **reading** · Paragraph G.

'Blind second **reading**, in which the second reader does not see the first report until they have committed to their own.' One word only, so the four-word name has to be cut to the part the question does not already give you.

Mechanism F2 — Word limit decides which words are the answer

Questions 37–40

37 **D** · Paragraph D.

'A proportion of the examiners reversed their own previous judgement on a pair of prints they themselves had already decided about.'

Mechanism F1 — Answers out of order + repeats allowed

38 **F** · Paragraph F.

'The first kind should be shared and the second kind withheld until a judgement has been recorded.'

Mechanism F1 — Answers out of order + repeats allowed

39 **H** · Paragraph H.

'A diagnosis confirmed by a second reader who had already seen the first report is one opinion with a supporter attached.'

Mechanism F1 — Answers out of order + repeats allowed

40 **G** · Paragraph G.

Written judgements before anybody speaks, blind second reading in screening, and sequential unmasking in forensic laboratories.

Mechanism F1 — Answers out of order + repeats allowed