

Psychology Units 3 & 4

Chapter 10 — Specific phobia

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

Attribution: Classbasics Pty Ltd, vwx.au

Aboriginal and Torres Strait Islander content has been excluded as accuracy cannot be guaranteed, and it is better to be respectful than cover the entire curriculum inaccurately.

Significant effort has been made to ensure this content is legal. Please send any areas of concern to admin@vwx.au with appropriate document/legal references so errors can be verified and changes be made.

Contents

Section	Page
10A The development of specific phobia	2
10B Evidence-based interventions for specific phobia	13
Topic 5 Test A — Multiple choice	21
Test A — solutions	26
Topic 5 Test B — Short answer	28
Test B — solutions	30

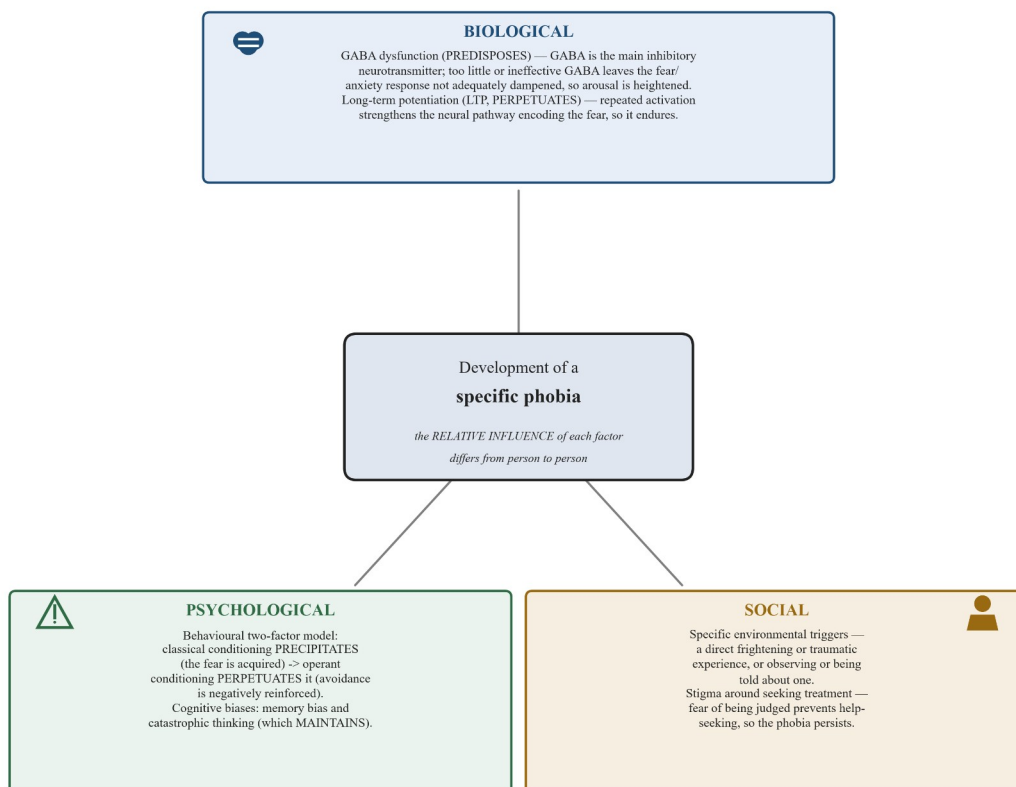
Chapter 10 Specific phobia — 10A The development of specific phobia

Theory

A **specific phobia** is a diagnosable anxiety disorder involving a **persistent, excessive and irrational fear** of a particular object or situation. The fear is **out of proportion to the actual danger** posed, causes **significant distress**, and typically leads the person to **avoid** the feared object or situation (or endure it with intense anxiety). Common examples include a phobia of dogs, spiders, heights, flying, needles or enclosed spaces.

No single factor explains why one person develops a specific phobia while another does not. The **biopsychosocial approach** treats the disorder as the product of interacting **biological, psychological** and **social** contributing factors. It is useful to separate the factors that help **precipitate** (bring on/acquire) a phobia from those that **perpetuate** (maintain) it, because the same disorder can be started by one process and kept going by another.

Relative influence. The study design asks about the **relative influences** of these factors, not simply a list of them. The three domains do not contribute equally, and they do not contribute in the same proportions for every person. Two people can meet the same frightening event and only one of them develops a phobia, because the **combination** and the **strength** of the factors present differ: one person may carry a marked biological vulnerability, another may have none but a powerful pattern of avoidance and catastrophic thinking, and a third may stay unwell mainly because stigma keeps them out of treatment. The factors also **interact** — a biological vulnerability makes an intense fear reaction more likely, which in turn makes a strong conditioned association more likely — so **no single factor is either necessary or sufficient** on its own. Explaining a person's phobia therefore means judging **which factors are doing most of the work for this person**, and recognising that the same disorder may rest on a quite different balance of factors in someone else.



Biological factors.

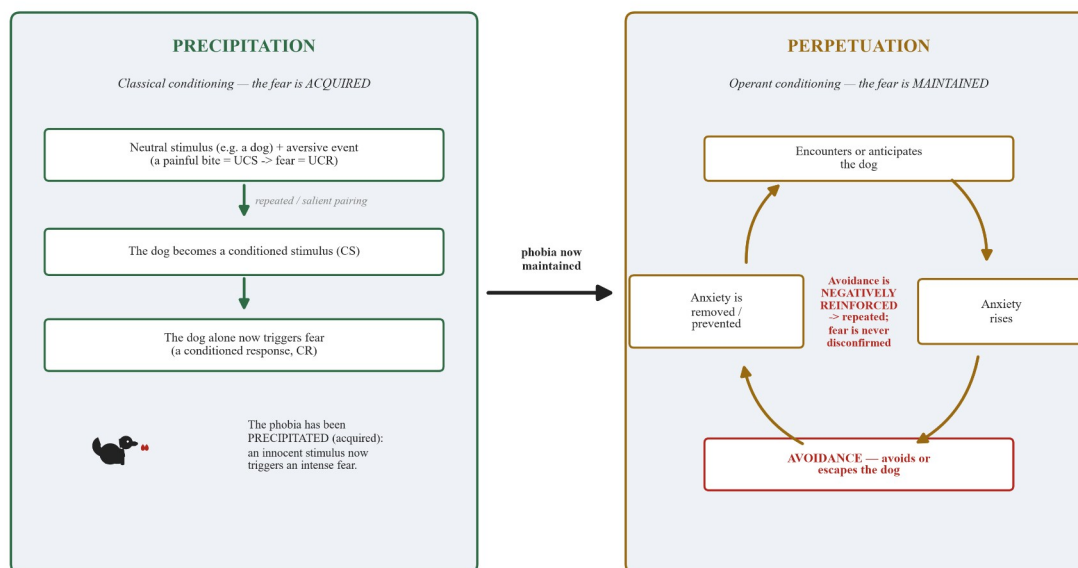
- **GABA dysfunction.** GABA (gamma-aminobutyric acid) is the brain's main **inhibitory** neurotransmitter: when it binds to a receptor on a postsynaptic neuron it makes that neuron **less likely to fire**, which "dampens" or calms neural activity. If GABA is produced in **insufficient amounts**, or is **not received effectively** at the receptor, postsynaptic neurons are **not adequately inhibited**. The fear and anxiety response is therefore not properly regulated, and the person experiences **heightened physiological arousal** — a body more easily and

more strongly tipped into a fear reaction. (GABA is introduced as the principal inhibitory neurotransmitter in Chapter 3; here it is applied to the over-arousal seen in phobia.) Because this weak inhibition is present **before** any frightening event and makes an intense fear reaction more likely, GABA dysfunction is a **predisposing vulnerability**: it belongs on the **development (precipitating)** side, making the phobia **easier to acquire**, rather than being a process that maintains it.

- **Long-term potentiation (LTP).** LTP is the **long-lasting strengthening of the connections between neurons** that results from their **repeated, simultaneous activation**. When a fear association is activated again and again, the neural pathway that encodes it becomes **more efficient**, so the fear response is later triggered **more easily and more strongly**. In effect the fear “learns” and **consolidates** at the level of the synapse, making the phobic reaction durable. (LTP is the neural basis of long-term memory formation met in Chapter 3.) Because LTP can only act on a fear association that **already exists**, it works on the **perpetuating** side: each repeated activation makes the established fear quicker and stronger, so the phobia endures.

Psychological factors.

The **behavioural model** explains a specific phobia through **two learning processes** working in sequence — the **two-factor model**. The phobia is first **precipitated** and then **perpetuated**.



- **Precipitation by classical conditioning.** The phobia is **acquired** when a previously neutral stimulus is **associated** with a stimulus that already produces fear. For example, a dog (neutral stimulus) is paired with a **painful bite** (an unconditioned stimulus that reflexively produces fear). Through this association the dog becomes a **conditioned stimulus** that, on its own, now triggers **fear** (a conditioned response). Classical conditioning explains **how the fear started**. (Classical conditioning is covered in Chapter 5.)
- **Perpetuation by operant conditioning.** The phobia is **maintained** because the person **avoids** the feared object or situation. Avoidance **removes or prevents** the unpleasant anxiety, and this reduction in anxiety **negatively reinforces** the avoidance behaviour, making it **more likely to be repeated**. Because the person keeps avoiding, they **never have the experience** that would show the object is harmless — the fear is **never disconfirmed** — so the phobia continues. (Operant conditioning and negative reinforcement are covered in Chapter 5.)

Alongside the behavioural model, **cognitive biases** — systematic errors in the way a person processes information — help **maintain** a specific phobia:

- **Memory bias.** The person **remembers phobia-relevant information or events as more threatening, or as more frequent, than they actually were**. Their memory is distorted toward the danger (for example, recalling a fairly ordinary encounter with a dog as terrifying), which keeps the fear strong.
- **Catastrophic thinking.** The person **overestimates and exaggerates the threat**, imagining the **worst possible outcome** (“if I see a dog it will attack me and I won’t be able to escape”). **Examiner-critical point:**

catastrophic thinking **maintains (perpetuates)** the phobia — it keeps anxiety high and drives further avoidance. It is **not** the original **cause** of the phobia.

Social factors.

- **Specific environmental triggers.** A phobia can be brought on by an environmental event — most directly a **traumatic or frightening experience** with the object or situation (being bitten by a dog), but also by **observing** someone else react fearfully to it, or by being **told** frightening information about it. These triggers help **precipitate** the phobia.
- **Stigma around seeking treatment.** **Stigma** is social disapproval or negative judgement attached to a personal characteristic. If a person fears being **judged, embarrassed or seen as weak** for having a phobia or for seeking psychological help, they may **not access treatment**, so the phobia is left untreated and **persists**. Stigma is therefore a factor that helps **perpetuate** the disorder.

How to analyse a scenario. (1) Read the scenario and **classify each contributing factor** as **biological** (GABA dysfunction, LTP), **psychological** (classical/operant conditioning, memory bias, catastrophic thinking) or **social** (environmental triggers, stigma). (2) For the behavioural factors, check whether the process **precipitated** the phobia (**classical** conditioning acquired it) or **perpetuated** it (**operant** conditioning maintained it through negatively reinforced avoidance). (3) Place **catastrophic thinking, memory bias, avoidance** and **LTP** on the **maintenance (perpetuating)** side, not the cause side; place the **environmental trigger** and the **GABA vulnerability** on the **development (precipitating)** side. (4) Link each factor **to the scenario** — name the mechanism and say what it does here, rather than only defining it. (5) Where the question invites it, judge the **relative influence** — say which factor is doing most of the work for *this* person, and why the same events might not have produced a phobia in someone else.

Worked examples

Example 1 — scaffolded

Priya was bitten by a large dog as a child and developed a phobia of dogs. She now crosses the road to avoid every dog she sees, which quickly settles her anxiety. A psychologist notes that Priya shows lower-than-typical GABA activity. Classify each contributing factor in Priya's phobia as biological, psychological or social, and explain each one.

Working	Comment
Being bitten by a dog is a direct traumatic experience → a social factor (a specific environmental trigger) that helped precipitate the phobia.	The environmental event is classified as social; note that it <i>started</i> the phobia.
Lower-than-typical GABA activity → a biological factor: too little inhibitory neurotransmitter means the fear response is not adequately dampened, so arousal is heightened. This is a predisposing vulnerability on the development (precipitating) side — it made the bite easier to turn into a phobia.	Tie GABA to <i>insufficient inhibition</i> → heightened arousal, not just “brain chemistry”; then say which side of the precipitate/perpetuate split it sits on.
Crossing the road to avoid dogs, which settles her anxiety → a psychological factor: operant conditioning. Avoidance removes anxiety, which negatively reinforces the avoidance and perpetuates the phobia.	Name the process (operant) and the mechanism (negative reinforcement) and say it <i>maintains</i> the phobia.
The bite pairing a dog with pain/fear is classical conditioning (psychological), which precipitated the fear response to dogs.	The same bite is <i>both</i> a social trigger and the basis of classical conditioning — say which role you mean.

Example 2 — scaffolded

Marcus has a phobia of lifts after being trapped in one during a power cut. He now takes the stairs everywhere, and each time he does his anxiety drops. Using the two-factor model, explain how Marcus's phobia was precipitated and how it is perpetuated.

Precipitation (classical conditioning): being trapped (an unconditioned stimulus producing fear) was paired with the **lift** (neutral stimulus).

Identify the pairing that *acquired* the fear.

The lift became a **conditioned stimulus** that now triggers **fear** (a conditioned response) on its own.

Name the CS and CR — the fear is now to the lift itself.

Perpetuation (operant conditioning): Marcus **avoids** lifts by taking the stairs; this **removes the anxiety**.

Avoidance is the operant behaviour; anxiety reduction is its consequence.

Because the anxiety reduction is a desirable consequence, the avoidance is **negatively reinforced** and repeated; Marcus never learns that the lift is safe, so the fear is **not disconfirmed**.

State the reinforcement type *and* the “never disconfirmed” idea — that is why it lasts.

Example 3 — unscaffolded

Explain how **GABA dysfunction** and **long-term potentiation** could each contribute to a person’s specific phobia of spiders.

GABA is the brain’s main **inhibitory** neurotransmitter, calming neural activity by making postsynaptic neurons less likely to fire. If the person produces **too little GABA**, or their GABA receptors respond **ineffectively**, the fear and anxiety response is **not adequately inhibited**, so they experience **heightened physiological arousal** and are tipped more easily into an intense fear reaction when a spider appears. **Long-term potentiation** then contributes as the fear is experienced repeatedly: each activation **strengthens the neural pathway** that encodes the spider–fear association, so over time the pathway becomes more efficient and the fear is triggered **more easily and more strongly**. ∴ weak inhibition (GABA dysfunction) leaves the person over-aroused and so **predisposes** them to acquiring the phobia, while LTP acts only once the fear association exists and **perpetuates** it by consolidating and strengthening the fear pathway — making the phobic response both easily provoked and durable.

Example 4 — unscaffolded

A student writes: “Catastrophic thinking is what causes a specific phobia in the first place.” Evaluate this claim.

The claim is **incorrect**. **Catastrophic thinking** — overestimating and exaggerating the threat and imagining the worst possible outcome — is a **cognitive bias that maintains (perpetuates)** a specific phobia; it is **not** its original cause. A specific phobia is typically **precipitated** by a learning experience or environmental trigger — for example, **classical conditioning**, in which a neutral stimulus is paired with a fear-producing event, or a **direct frightening experience** with the object. Once the phobia exists, catastrophic thinking **keeps anxiety high** and drives continued **avoidance**, which stops the fear from being disconfirmed and so keeps the phobia going. ∴ catastrophic thinking is a **perpetuating** factor operating after the phobia has formed, not the factor that first causes it.

Practice questions

Scaffolded

Q1. (a) Define a specific phobia. (b) State whether the fear in a specific phobia is proportionate to the actual danger. (c) Name the approach used to explain the development of a specific phobia across biological, psychological and social factors.

Q2. Consider the biological contribution to specific phobia. (a) State whether GABA is an excitatory or an inhibitory neurotransmitter. (b) Explain what “GABA dysfunction” means and its effect on arousal. (c) Explain how long-term potentiation contributes to a specific phobia.

Q3. A boy develops a phobia of bees after being stung, and now runs indoors whenever he hears buzzing, which calms him down. (a) Name the learning process that **precipitated** the phobia. (b) Name the learning process that **perpetuates** the phobia. (c) Explain how the perpetuating process works, using the term negative reinforcement.

Q4. Consider the cognitive biases involved in specific phobia. (a) Define memory bias. (b) Define catastrophic thinking. (c) State whether catastrophic thinking causes or maintains a specific phobia.

Q5. Consider the social contribution to specific phobia. (a) Give one example of a specific environmental trigger for a phobia. (b) Explain how stigma around seeking treatment can perpetuate a phobia. (c) State whether an environmental trigger and stigma are precipitating or perpetuating factors.

Q6. Freya is afraid of flying. She was in a very turbulent flight as a teenager, refuses all flights now (which reduces her anxiety), and believes every plane she sees “is going to crash”. (a) Classify each of the three factors above as biological, psychological or social. (b) Which factor helped precipitate the phobia? (c) Which two factors help perpetuate it?

Un scaffolded

Q7. Distinguish between the roles of classical conditioning and operant conditioning in the development of a specific phobia. (2 marks)

Q8. Two people are bitten by the same dog on the same day. One develops a specific phobia of dogs; the other does not. Explain how a dysfunction in GABA activity in one of them could help account for this difference. (3 marks)

Q9. Since being badly frightened by a spider three years ago, Nadia has reacted with fear to spiders many times, and her fear is now triggered faster and more strongly than it was at first. Explain, with reference to long-term potentiation, why her fear response has strengthened over time. (3 marks)

Q10. Tomas has a specific phobia of dogs. He describes the small dog that once barked at him as “an enormous dog that lunged at me”, and insists he is “constantly having near-misses with dogs”, although in fact he sees a dog only every few weeks. Explain, with reference to memory bias, how this way of remembering helps maintain his phobia. (4 marks)

Q11. Distinguish between memory bias and catastrophic thinking as cognitive biases in specific phobia. (2 marks)

Q12. A student writes: “Avoiding the feared object *positively* reinforces the avoidance, because the person feels better afterwards.” Identify and correct the error in this statement. (2 marks)

Q13. Explain how a specific environmental trigger can precipitate a specific phobia, and give one example of such a trigger that does **not** involve the person being directly harmed. (3 marks)

Q14. Nina and Owen both developed a specific phobia of heights after the same abseiling accident at school. Nina climbs to her third-floor flat every day and rates her fear as mild; Owen refuses every high place, is convinced that any balcony will collapse under him, and has never told anyone because he thinks he would be laughed at. Explain what this difference shows about the **relative influence** of the factors that contribute to a specific phobia. (4 marks)

Q15. Leo has a specific phobia of needles. When he was young a nurse’s rushed injection was very painful and frightening. He now refuses all blood tests, and the relief he feels afterwards is strong. A brain scan shows reduced GABA activity, and Leo says that being seen as “childish” stops him getting help. Identify and classify **three** contributing factors in Leo’s phobia as biological, psychological or social, and for each explain whether it helped precipitate or perpetuate the phobia. (6 marks)

Q16. Research scenario. A psychologist tests whether a drug that increases the effect of GABA reduces anxiety in people with a specific phobia. Forty adults with a spider phobia are randomly allocated to either the GABA-enhancing drug or an inactive placebo, then shown a spider while their self-reported anxiety (0–100) is recorded. (a) Identify the independent variable and the dependent variable. (b) Explain why a placebo group is used. (c) Write a possible directional (one-tailed) hypothesis for this investigation. (4 marks)

Q17. Data interpretation. A clinic records, for 60 clients with a specific phobia, how often each week they use avoidance and their average anxiety rating (0–10).

Weekly avoidance behaviours	Number of clients	Mean anxiety rating (0–10)
0–3 (low avoidance)	14	4.1
4–7 (moderate avoidance)	22	6.5

Weekly avoidance behaviours	Number of clients	Mean anxiety rating (0–10)
8+ (high avoidance)	24	8.2

- (a) Describe the relationship between weekly avoidance and mean anxiety rating.
- (b) Explain how this pattern is consistent with the operant-conditioning account of how a phobia is perpetuated.
- (c) State one reason these data alone cannot prove that avoidance *causes* the higher anxiety. (4 marks)

Q18. Amara developed a phobia of dogs after a frightening chase by a stray, and her older sister, whom she watched scream and run from dogs throughout childhood, is also dog-phobic. Apply the biopsychosocial approach to explain **two** social factors that could have contributed to Amara’s phobia. (4 marks)

Q19. Evaluate the behavioural (two-factor) model as an explanation of specific phobia, referring to one strength and one limitation. (4 marks)

Q20. Extended response. Jordan has a specific phobia of thunderstorms. As a young child he was alone at home during a violent storm that damaged the roof and terrified him. He now checks the forecast obsessively, stays indoors whenever storms are predicted (which calms him), and is convinced that “a storm will destroy the house and I’ll die”. A psychologist also finds that Jordan has low GABA activity. Using the biopsychosocial approach, explain how biological, psychological and social factors could each have contributed to the development and continuation of Jordan’s phobia. In your response, distinguish clearly between the factors that precipitated the phobia and those that perpetuate it. (6 marks)

Answers

Q1. (a) A persistent, excessive, irrational fear of a specific object or situation, out of proportion to the actual danger, causing significant distress and avoidance. (b) No — it is out of proportion to (greater than) the actual danger. (c) The biopsychosocial approach. **Q2.** (a) Inhibitory. (b) Too little or ineffective GABA → postsynaptic neurons not adequately inhibited → the fear response is not dampened → heightened arousal. (c) Repeated activation strengthens the neural pathway encoding the fear, so the fear is triggered more easily and strongly. **Q3.** (a) Classical conditioning. (b) Operant conditioning. (c) Running indoors removes the anxiety; this reduction negatively reinforces the avoidance, so it is repeated and the fear is never disconfirmed. **Q4.** (a) Remembering phobia-relevant information/events as more threatening or frequent than they were. (b) Overestimating/exaggerating the threat and imagining the worst possible outcome. (c) Maintains (perpetuates) it — it does not cause it. **Q5.** (a) e.g. being bitten by a dog / a traumatic experience / observing or being told about a frightening event. (b) Fear of being judged stops the person seeking help, so the phobia is left untreated and persists. (c) Environmental trigger = precipitating; stigma = perpetuating. **Q6.** (a) Turbulent flight = social (environmental trigger); refusing flights to reduce anxiety = psychological (operant conditioning); “every plane will crash” = psychological (catastrophic thinking). (b) The turbulent flight. (c) Avoidance (operant conditioning) and catastrophic thinking. **Q7.** Classical conditioning precipitates/acquires the phobia (a neutral stimulus paired with a fear-producing stimulus becomes a CS that triggers fear); operant conditioning perpetuates/maintains it (avoidance removes anxiety and is negatively reinforced, so the fear is never disconfirmed). **Q8.** GABA is inhibitory; with too little/ineffective GABA that person’s neurons are not adequately inhibited, so their fear response to the bite is not dampened and their arousal is far more intense — a predisposing vulnerability that makes a strong fear association, and so a phobia, more likely to form from the same event. **Q9.** Each fearful encounter re-activates the spider–fear pathway; repeated activation strengthens those synaptic connections (LTP) and makes the pathway more efficient, so the fear is triggered faster and more strongly — LTP therefore helps perpetuate the phobia. **Q10.** Tomas’s memory bias distorts both the severity of the event (a small dog barking → “an enormous dog that lunged”) and its frequency (“constantly”, though he sees a dog every few weeks); the distorted record keeps his estimate of the threat high and is never corrected, so anxiety and avoidance continue and the phobia is maintained. **Q11.** Memory bias = remembering phobia-relevant events as more threatening/frequent than they were; catastrophic thinking = overestimating the threat and imagining the worst outcome. Both maintain the phobia. **Q12.** Error: this is *negative*, not positive, reinforcement. The avoidance is strengthened because it **removes/prevents** an unpleasant state (anxiety), not because it adds a pleasant one. **Q13.** An environmental event associated with the object can precipitate the phobia; a trigger not involving direct harm = e.g. observing someone else react with terror, or being told frightening information about the object. **Q14.** The precipitating factor (the accident) was identical, so a trigger alone does not determine the outcome; Owen has a strong set of perpetuating factors — negatively reinforced avoidance, catastrophic thinking and stigma keeping him from help — that Nina lacks. The relative weight of the factors, not any single factor, decides whether and how severely a phobia persists. **Q15.** Any three of: painful injection = social trigger (precipitating); classical conditioning of the needle–fear association = psychological (precipitating); avoidance of blood tests, negatively reinforced = psychological (perpetuating); reduced GABA = biological, a predisposing vulnerability (precipitating side — it made the fear easier to acquire); stigma (“childish”) = social (perpetuating). **Q16.** (a) IV = whether the person receives the GABA-enhancing drug or the placebo; DV = self-reported anxiety (0–100). (b) To control for the placebo effect, so any difference can be attributed to the drug, not to expectation. (c) e.g. “Adults with a spider phobia given the GABA-enhancing drug will report lower anxiety than those given the placebo.” **Q17.** (a) As weekly avoidance increases, mean anxiety increases (a positive relationship). (b) Higher avoidance keeps the fear from being disconfirmed and is negatively reinforced, so the phobia and its anxiety are maintained. (c) It is correlational — a third variable (e.g. phobia severity) could drive both, and the direction of the effect is not established. **Q18.** Direct trigger: the frightening chase (a specific environmental trigger) precipitated the fear. Vicarious/observational trigger: watching her sister repeatedly react with terror modelled and reinforced the fear of dogs. **Q19.** Strength: it clearly explains both how a phobia is acquired (classical) and why it persists (operant), and generates effective treatments. Limitation: not everyone with a phobia recalls a conditioning event, and it neglects biological (GABA/LTP) and cognitive (catastrophic thinking) contributions — so it is incomplete. **Q20.** Model response given in the solutions.

Fully-worked solutions

Q1. (a) A **specific phobia** is a **persistent, excessive and irrational fear** of a particular object or situation. (b) **No** — the fear is **out of proportion to the actual danger**; it is far greater than the real threat warrants, which is part of what

makes it irrational. (c) The **biopsychosocial approach**, which explains the disorder as the product of interacting biological, psychological and social factors.

Q2. (a) GABA is an **inhibitory** neurotransmitter. (b) **GABA dysfunction** means the brain produces **too little GABA**, or its GABA receptors respond **ineffectively**, so postsynaptic neurons are **not adequately inhibited**. Because GABA normally dampens neural activity, this loss of inhibition means the fear and anxiety response is **not calmed**, and the person experiences **heightened physiological arousal**. (c) **Long-term potentiation** is the strengthening of neural connections through repeated activation; each time the fear pathway is activated it is **strengthened and made more efficient**, so the phobic fear is later triggered **more easily and more strongly**. Because LTP acts on a fear association that already exists, it helps **perpetuate** the phobia.

Q3. (a) The phobia was **precipitated** by **classical conditioning**: the sting (an unconditioned stimulus producing fear/pain) was paired with the bees/buzzing (neutral stimulus), which became a conditioned stimulus for fear. (b) It is **perpetuated** by **operant conditioning**. (c) When the boy hears buzzing he **runs indoors (avoidance)**, which **removes the anxiety**. This reduction in an unpleasant state **negatively reinforces** the avoidance, so he is **more likely to avoid** again; because he keeps avoiding, he never learns that the bees are not dangerous, so the fear is **not disconfirmed** and the phobia continues.

Q4. (a) **Memory bias** is a cognitive bias in which the person **remembers phobia-relevant information or events as more threatening, or more frequent, than they actually were**. (b) **Catastrophic thinking** is a cognitive bias in which the person **overestimates and exaggerates the threat**, imagining the **worst possible outcome**. (c) Catastrophic thinking **maintains (perpetuates)** the phobia — it does **not cause** it.

Q5. (a) A specific environmental trigger could be **being bitten by a dog**, or another traumatic or frightening experience with the object/situation (also acceptable: observing someone else's fear, or being told frightening information). (b) **Stigma** — fear of being **judged or embarrassed** for having a phobia or seeking help — can stop a person **accessing treatment**, so the phobia is left **untreated** and **persists**. (c) An **environmental trigger** is a **precipitating** factor (it helps start the phobia); **stigma** is a **perpetuating** factor (it helps maintain it).

Q6. (a) The **turbulent flight** is a **social** factor (a specific environmental trigger); **refusing all flights because it reduces anxiety** is a **psychological** factor (operant conditioning / negatively reinforced avoidance); believing “**every plane will crash**” is a **psychological** factor (catastrophic thinking). (b) The **turbulent flight** helped **precipitate** the phobia. (c) **Avoidance** (operant conditioning) and **catastrophic thinking** both help **perpetuate** it.

Q7. **Classical conditioning** explains how a specific phobia is **precipitated (acquired)**: a previously **neutral stimulus** (e.g. a dog) is **associated** with a stimulus that already produces fear (e.g. a painful bite), so the neutral stimulus becomes a **conditioned stimulus** that triggers **fear** (a conditioned response) on its own. **Operant conditioning** explains how the phobia is **perpetuated (maintained)**: the person **avoids** the feared object, which **removes or prevents** the anxiety; this reduction **negatively reinforces** the avoidance so it is repeated, and because the person keeps avoiding they never learn the object is safe (the fear is **not disconfirmed**). *(Full marks: classical = precipitates/acquires with the CS→CR idea; operant = perpetuates via negatively reinforced avoidance; both sides congruent.)*

Q8. GABA is the brain's main **inhibitory** neurotransmitter, which normally makes neurons **less likely to fire** and so **calms** neural activity. In the person with a **GABA dysfunction** — too little GABA, or receptors that respond ineffectively — the neurons involved in the fear response are **not adequately inhibited**, so when the dog bites, their fear and anxiety reaction is **not dampened** and they experience far more **intense physiological arousal** than the other person does. Because the same event produces a much stronger and less well-regulated fear reaction in them, a **strong fear association with dogs is more likely to form and to endure**, whereas in the person with typical GABA function the fear is calmed and subsides. GABA dysfunction is therefore a **predisposing biological vulnerability** — it does not by itself cause the phobia, but it makes the phobia much more likely to be **acquired** from the same trigger. *(Three-step chain: GABA is inhibitory → dysfunction = insufficient inhibition → fear not dampened / arousal heightened, so the phobia forms in one person and not the other.)*

Q9. **Long-term potentiation (LTP)** is the **long-lasting strengthening of the connections between neurons** that results from their **repeated, simultaneous activation**. Nadia has reacted with fear to spiders **many times** over three years, and each of those reactions **re-activates the same spider–fear pathway**. This **repeated activation** **strengthens the synaptic connections** along that pathway and makes it **more efficient at transmitting**, so the fear

response is now triggered **faster and more strongly** than it was at first. The fear has, in effect, **consolidated** at the level of the synapse, which is why it has become more durable rather than fading — LTP therefore acts on the **perpetuating** side, keeping an already-acquired phobia going. *(Three-step chain: repeated activation of the fear pathway → connections strengthened via LTP → fear triggered more easily and more strongly.)*

Q10. Memory bias is a cognitive bias in which a person **remembers phobia-relevant events or information as more threatening, or as more frequent, than they actually were**. Tomas shows **both forms**. He distorts the **severity** of the original event — a small dog barking is recalled as “an enormous dog that lunged at me” — and he distorts the **frequency** of encounters, insisting he is “constantly having near-misses” when he in fact sees a dog only every few weeks. Because the evidence Tomas draws on is his own **distorted memory**, everything he recalls tells him that dogs are genuinely dangerous and that dangerous encounters are common, so his **estimate of the threat stays high** and is **never corrected** by an accurate record of what actually happened. That sustained sense of danger **keeps his anxiety high and drives his continued avoidance**, so the phobia is **maintained**. Note that the bias **perpetuates** the phobia; it is not what caused it. *(Full marks: define memory bias; identify the distortion of severity and of frequency in the scenario; explain that the distorted record keeps the perceived threat high; conclude that this maintains the phobia.)*

Q11. Memory bias involves **remembering** phobia-relevant events or information as **more threatening or more frequent** than they actually were, distorting the past toward danger. **Catastrophic thinking** involves **overestimating the threat in the present/future** and imagining the **worst possible outcome**. Both are cognitive biases that **maintain** the phobia, but memory bias distorts **recall of past events**, whereas catastrophic thinking exaggerates the **anticipated threat**. *(Both sides, congruent.)*

Q12. The statement is **incorrect**: the avoidance is strengthened by **negative** reinforcement, not positive reinforcement. **Positive** reinforcement strengthens a behaviour by **adding a desirable stimulus** after it; **negative** reinforcement strengthens a behaviour by **removing or preventing an unpleasant one**. Here the consequence of avoiding is that the person’s **anxiety is taken away** — something unpleasant is removed, not something pleasant added — so the avoidance is **negatively reinforced** and becomes more likely to be repeated. (“Feeling better” is simply what the removal of anxiety feels like; it does not make the reinforcement positive.)

Q13. A **specific environmental trigger** is an event associated with the object or situation that helps **precipitate (start)** the phobia by producing or modelling fear. A trigger that does **not** involve the person being directly harmed is, for example, **observing someone else react with intense fear** to the object (vicarious/observational), or **being told frightening information** about it (for example, hearing repeated warnings that all spiders are deadly). In each case the fear is acquired without the person themselves being hurt. *(Three-step chain: environmental event → associated with / models fear → phobia precipitated; plus a valid indirect example.)*

Q14. Nina and Owen were **precipitated** into their phobias by the **same environmental trigger** — the one abseiling accident — so the trigger by itself clearly does **not** determine the outcome. What differs is the **perpetuating** factors and how **strongly** they operate. Owen has three working together: **negatively reinforced avoidance** (refusing every high place removes his anxiety, so the avoidance is repeated and the fear is **never disconfirmed**), **catastrophic thinking** (being convinced any balcony will collapse keeps his threat estimate and anxiety high), and **stigma** (expecting to be laughed at has stopped him telling anyone, so the phobia is left untreated). Nina keeps encountering heights and has none of these, so her fear has stayed mild. This is what **relative influence** means: the same factors are not present, or not equally strong, in every person, and a phobia’s course is set by the **particular combination and weight** of the factors acting on that individual rather than by any single factor. *(Full marks: note the identical precipitating factor; name the perpetuating factors that differ; tie each to the scenario; state the general point about relative influence.)*

Q15. Any **three** of the following, correctly classified and labelled as precipitating or perpetuating:

- The **painful, frightening injection** — a **social** factor (a specific environmental trigger) that helped **precipitate** the phobia.
- The **needle becoming associated with pain/fear** — a **psychological** factor (**classical conditioning**) that **precipitated** the fear response to needles.
- **Refusing all blood tests, with strong relief afterwards** — a **psychological** factor (**operant conditioning**): avoidance removes anxiety and is **negatively reinforced**, so it **perpetuates** the phobia.

- **Reduced GABA activity** — a **biological** factor: insufficient inhibition leaves Leo **over-aroused**, so the injection frightened him far more intensely than it would otherwise have done. It is a **predisposing vulnerability** and therefore sits on the **precipitating (development)** side — it made the phobia **easier to acquire**, rather than being a process that maintains it.
- **Fear of being seen as “childish”** — a **social** factor (**stigma**) that stops Leo seeking help, **perpetuating** the phobia.

(Full marks: three factors, each correctly classified bio/psycho/social and correctly identified as precipitating or perpetuating — six assessable elements in all.)

Q16. (a) The **independent variable** is **whether the participant receives the GABA-enhancing drug or the placebo**; the **dependent variable** is the participant’s **self-reported anxiety (0–100)** when shown the spider. (b) A **placebo group** is used to **control for the placebo effect** — the possibility that simply believing they have taken an anxiety drug reduces participants’ anxiety. Comparing the drug group with a placebo group means any difference in anxiety can be attributed to the **drug’s actual effect on GABA**, not to expectation. (c) A possible **directional hypothesis**: “*Adults with a spider phobia who receive the GABA-enhancing drug will report lower anxiety when shown a spider than those who receive the placebo.*” (Names both IV levels — drug vs placebo — and a directional DV — lower anxiety.)

Q17. (a) There is a **positive relationship**: as **weekly avoidance increases** (from 0–3, to 4–7, to 8+), the **mean anxiety rating also increases** (4.1 → 6.5 → 8.2). (b) This fits the **operant-conditioning** account: clients who avoid more are **more strongly negatively reinforced** for avoiding and **never disconfirm** their fear, so their phobia — and the anxiety that goes with it — is **maintained at a higher level**. High avoidance is exactly what the perpetuation account predicts should accompany a strongly maintained phobia. (c) These data are **correlational**, so they cannot prove avoidance **causes** the higher anxiety: a **third variable** (such as overall phobia severity) could raise **both** avoidance and anxiety, and the causal **direction** could run the other way (higher anxiety could drive more avoidance). *(Full marks: describe the positive relationship; link to negative reinforcement / fear not disconfirmed; note correlation ≠ causation with a reason.)*

Q18. Two **social** factors could have contributed to Amara’s phobia. First, the **frightening chase by a stray dog** is a **specific environmental trigger** — a direct, frightening experience with the object — that helped **precipitate** the phobia by producing an intense fear reaction associated with dogs. Second, **watching her older sister repeatedly scream and run from dogs** throughout childhood is a **social/observational trigger**: Amara **observed** a fearful model reacting to dogs, which could help acquire and reinforce her own fear without her being harmed herself. Both are **environmental (social) influences**, one direct and one observational, that could contribute to the development of Amara’s dog phobia. *(Full marks: two distinct social factors, each explained and tied to the scenario.)*

Q19. Strength: the behavioural **two-factor model** gives a clear, testable account of **both parts** of a phobia — how it is **acquired** (classical conditioning) and why it **persists** (operant conditioning through negatively reinforced avoidance) — and this directly informs **effective treatments** that reduce avoidance so the fear can be disconfirmed. **Limitation:** the model is **incomplete**: **not everyone** who develops a specific phobia can recall a conditioning event or trauma, and the model **neglects biological factors** (such as GABA dysfunction and LTP) and **cognitive factors** (such as catastrophic thinking) that also contribute. A full **biopsychosocial** explanation is therefore needed. *(Full marks: one developed strength AND one developed limitation, with a clear judgement that it is useful but incomplete.)*

Q20. Model response (6 marks). Jordan’s thunderstorm phobia can be explained using the **biopsychosocial approach**, distinguishing the factors that **precipitated** it from those that **perpetuate** it.

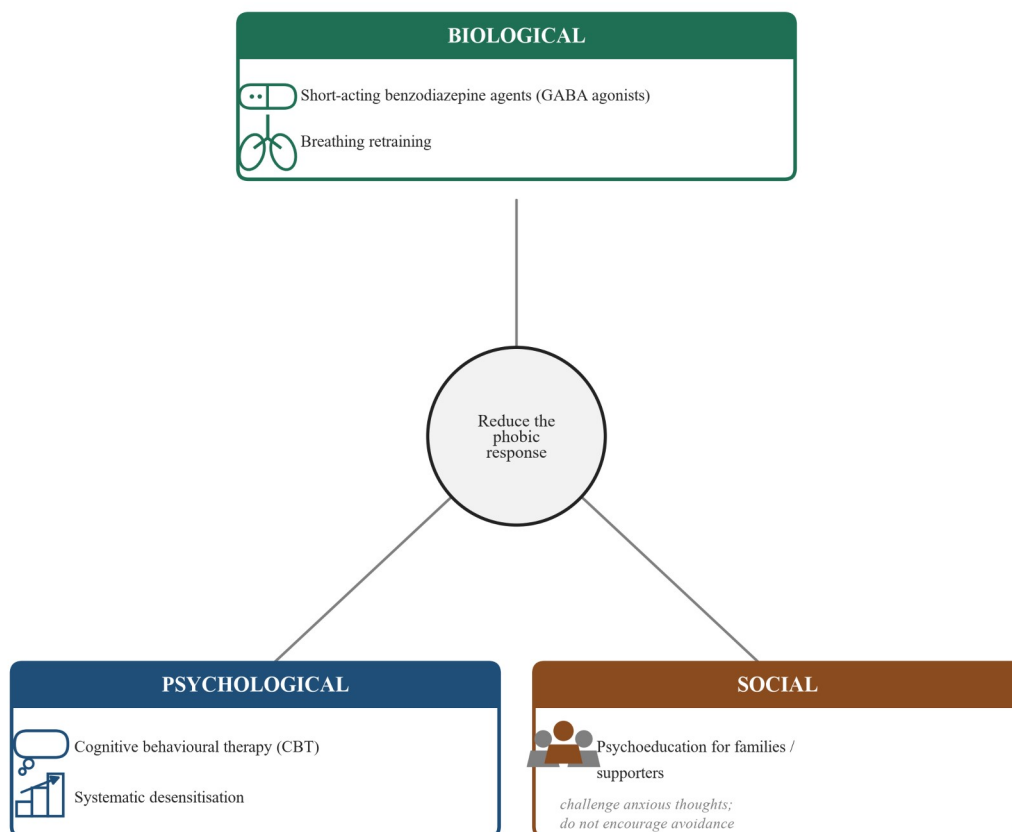
Precipitating factors. The **violent storm that damaged the roof and terrified him while he was home alone** is a **social** factor — a **specific environmental trigger** (a direct traumatic experience). Through **classical conditioning** (a **psychological** factor), the storm (with its thunder and darkening sky) became **associated** with intense fear, so storms became a **conditioned stimulus** that now trigger **fear** (a conditioned response) on their own. Jordan’s **low GABA activity** is the **biological** contribution on this side: because GABA is the main **inhibitory** neurotransmitter, insufficient inhibition meant his fear response that night was **not adequately dampened**, so he was **over-aroused** and far more intensely frightened than another child might have been. It is a **predisposing vulnerability** — it did not itself cause the phobia, but it made the fear association **easier to form**. Together these processes **started** the phobia.

Perpetuating factors. Jordan's **staying indoors whenever storms are predicted, and his obsessive forecast-checking, both of which calm him**, are **psychological** factors explained by **operant conditioning**: each behaviour **removes or prevents his anxiety**, which **negatively reinforces** it so it is repeated, and because he keeps avoiding storms he **never disconfirms** the fear. His belief that **"a storm will destroy the house and I'll die"** is **catastrophic thinking** — a cognitive bias that **overestimates the threat** and **maintains** the phobia by keeping anxiety high (it maintains, it did not cause). On the **biological** side, **long-term potentiation** has **strengthened** the storm–fear pathway with each frightening episode and each anxious anticipation, so the fear is now triggered **more easily and more strongly** — a biological process that keeps the phobia going.

∴ Jordan's phobia was **precipitated** by a traumatic environmental trigger acquired through classical conditioning, on a **biological vulnerability** (low GABA activity) that made an intense fear reaction more likely, and is **perpetuated** by negatively reinforced avoidance, catastrophic thinking and LTP strengthening the storm–fear pathway — a genuinely biopsychosocial picture. *(Full marks require: at least one factor from each of the biological, psychological and social domains, correctly explained and tied to the scenario, AND a clear separation of precipitating from perpetuating factors.)*

Theory

An **evidence-based intervention** is a treatment that research has shown to be effective. A **specific phobia** is a persistent, excessive and irrational fear of a particular object or situation that is out of proportion to any real danger (how a phobia develops and is maintained is covered in 10A). Because a phobia has contributing factors at more than one level, the most effective treatment plans also work at more than one level. The **biopsychosocial approach** treats the phobia at three levels at once — **biological** (the body and its chemistry), **psychological** (thoughts, learning and behaviour) and **social** (the person's relationships and environment). The evidence-based interventions for each level are summarised below.



Biological interventions. These target the body's physiology — chiefly the heightened arousal of the fear response.

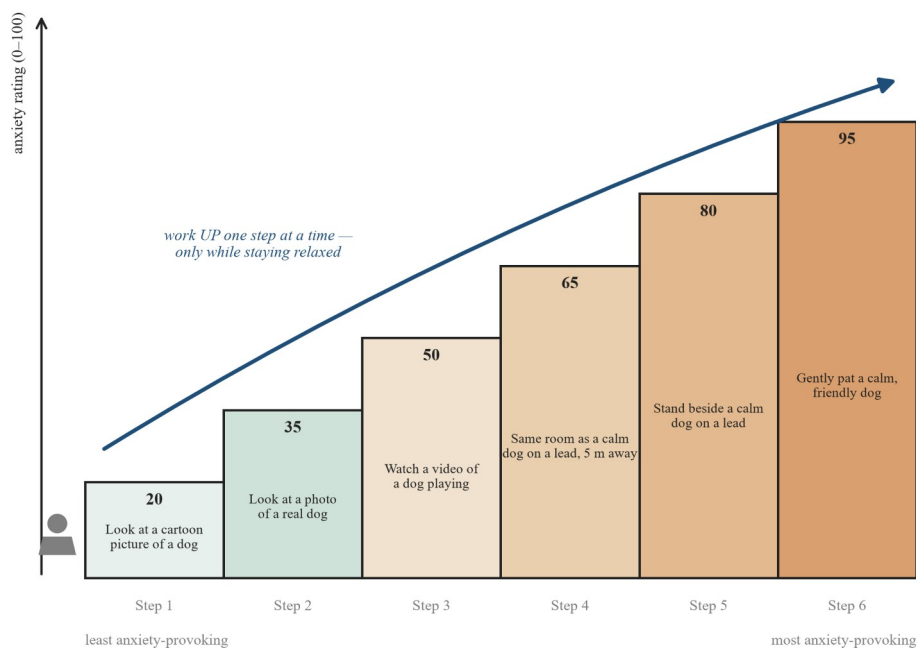
- **Short-acting anti-anxiety benzodiazepine agents (GABA agonists).** GABA (gamma-aminobutyric acid) is the brain's **main inhibitory neurotransmitter**: when it binds to a post-synaptic neuron it makes that neuron **less likely to fire** (Chapter 3). Benzodiazepines are **GABA agonists** — they **mimic and enhance** the action of GABA at its receptors, so the inhibition of post-synaptic neurons **increases**. This lowers overall neural excitation, which reduces the **physiological arousal** (racing heart, rapid breathing, muscle tension) of the fear response, so the person feels calmer. "Short-acting" means the drug acts quickly and wears off relatively quickly, so it is used for **short-term, acute relief** — for example, to manage severe anxiety before an unavoidable encounter with the feared stimulus. **Limitation (important):** benzodiazepines treat the **symptoms** (arousal) and not the **underlying learned fear**, so they do **not cure** the phobia — the fear returns when the drug wears off. With repeated use the person can develop **tolerance** and become **dependent**, so they are prescribed for the short term only.
- **Breathing retraining.** The fear response triggers rapid, shallow over-breathing (hyperventilation), which worsens the physical symptoms of panic. Breathing retraining **teaches the person a slow, controlled breathing technique** so they can deliberately slow their breathing and **reduce the physiological arousal** of

the fear response. It is a portable coping skill the person can use when facing the feared stimulus. It is **biological** because it acts directly on the body's arousal.

Psychological interventions. These target the learned thoughts and behaviours that maintain the phobia.

- **Cognitive behavioural therapy (CBT).** CBT combines a **cognitive** and a **behavioural** strand. The **cognitive** strand helps the client **identify and challenge unrealistic or unhelpful thoughts** — especially **catastrophic thinking** (over-estimating the danger, e.g. “the dog will certainly bite me and I will be badly hurt”) — and replace them with **realistic appraisals**. The **behavioural** strand helps the client **change maladaptive behaviours**, above all **avoidance**, often through graded tasks in which the client tests a feared prediction and learns that the feared outcome does not occur. Because CBT changes the **thoughts and behaviours** that keep the phobia going, it addresses a cause of the problem and its benefits tend to **last**.
- **Systematic desensitisation.** This is a **behavioural** technique that **gradually replaces the fear response with relaxation**, based on **classical conditioning** (counterconditioning; Chapter 5). It is carried out in three steps: (1) the client **learns a relaxation technique** (such as controlled breathing or progressive muscle relaxation); (2) the client and therapist build a **fear hierarchy** — a ranked list of situations involving the feared stimulus, ordered from the **least** to the **most** anxiety-provoking (in practice the client usually rates each situation for anxiety out of 100 to help rank them); (3) the client works **progressively up the hierarchy**, at each step using relaxation to stay calm while facing that situation (in imagination or in real life), and moves up **only once each step can be faced calmly**. It relies on **reciprocal inhibition**: a person **cannot be deeply relaxed and highly anxious at the same time**, so pairing each feared situation with relaxation gradually replaces the fear response with a relaxation response. Because it is **gradual**, the client is **never** confronted with the most feared situation straight away: each step must be faced calmly before the next one is attempted.

Fear hierarchy — a dog phobia (example)



Social interventions. These work through the person's social environment.

- **Psychoeducation for families and supporters.** This **teaches the family and supporters about the phobia and how to respond helpfully**. It recommends two specific actions: (a) helping the person **challenge unrealistic or anxious thoughts** (supporting the realistic appraisals learned in therapy, rather than agreeing that the feared stimulus is highly dangerous); and (b) **not encouraging avoidance behaviours**. Avoiding the feared stimulus brings **immediate relief**, which **negatively reinforces** the avoidance and, in the long term, **maintains the phobia** because the person never learns that the situation is safe. Well-meaning supporters often help the person avoid the feared object (taking a detour, making excuses); although it feels kind, this **perpetuates** the phobia. Psychoeducation teaches supporters to **stop enabling avoidance** and instead to gently encourage safe, graded engagement and to praise the person's efforts.

Combining the levels. In practice a treatment plan usually **combines** levels. Psychological interventions (especially **CBT** and **systematic desensitisation**) have the strongest evidence for **long-term** change; a benzodiazepine offers **short-term** symptom relief but is not a cure; and social support helps the person **maintain** their gains. Matching each intervention to its level is a common exam task.

Keep these straight.

- Benzodiazepines are GABA **agonists** — they **enhance** GABA’s inhibitory effect (they do **not** block it). They give **short-term symptom relief** and carry a **dependence** risk, so they are **not a long-term cure**.
- Systematic desensitisation is **gradual** — worked **up a fear hierarchy**, always **paired with relaxation**. The client **never starts with the most feared situation**.
- CBT changes **both thoughts and behaviours**.
- The correct **social** intervention is to **not encourage avoidance** (and to help challenge anxious thoughts) — **not** to help the person avoid the feared stimulus.
- Quick sort: **biological** = body/physiology; **psychological** = thoughts, learning and behaviour; **social** = the person’s relationships and environment.

How to answer a “select an intervention” scenario. (1) Identify the **level** asked for (biological, psychological or social). (2) **Name** an intervention at that level. (3) **Describe** how it works. (4) **Link** it to the scenario — do not just define the intervention.

Worked examples

Example 1 — scaffolded

Marcus has a specific phobia of dogs. His treatment plan has four parts: (i) his GP prescribes a short-acting benzodiazepine to use before an unavoidable visit to a relative whose house has a large dog; (ii) a clinic nurse teaches him a slow, controlled breathing technique to use on his own whenever he notices his heart racing; (iii) separately, his psychologist teaches him progressive muscle relaxation, builds a fear hierarchy with him, and has him work up it while he stays relaxed; (iv) his parents are taught to stop driving the long way to avoid every dog in the street. Classify each part as biological, psychological or social, and name the intervention.

Working	Comment
(i) The benzodiazepine is a biological intervention — a short-acting anti-anxiety agent (GABA agonist).	Drugs act on the body’s brain chemistry → biological.
(ii) Slow controlled breathing is a biological intervention — breathing retraining .	Taught here as a stand-alone coping skill (the therapy in (iii) has its own relaxation training), and it acts on physiological arousal → biological.
(iii) Relaxation plus a fear hierarchy climbed step by step is a psychological intervention — systematic desensitisation .	Relaxation + hierarchy worked through gradually = systematic desensitisation.
(iv) Teaching the parents to stop enabling avoidance is a social intervention — psychoeducation for supporters .	It works through the social environment; note the aim is to stop avoidance, not assist it.

Example 2 — scaffolded

Explain how the benzodiazepine reduces Marcus’s anxiety. Refer to GABA.

Working	Comment
GABA is the brain’s main inhibitory neurotransmitter: it makes post-synaptic neurons less likely to fire .	Start from the normal role of GABA (Chapter 3).
A benzodiazepine is a GABA agonist — it mimics and enhances GABA’s action at the receptor.	“Agonist” = enhances the neurotransmitter’s effect; it does not block it.
So the inhibition of post-synaptic neurons increases , reducing overall neural excitation/arousal .	More inhibition → less firing → lower arousal.

Working	Comment
Lower physiological arousal (slower heart rate, less muscle tension) is felt as reduced anxiety .	Link the neural effect to the felt reduction in anxiety.
Because it only damps the symptoms and risks dependence, it is a short-term aid, not a cure.	Always pair the mechanism with the key limitation.

Example 3 — unscaffolded

Leila has a specific phobia of spiders. Describe how a psychologist could treat her phobia using systematic desensitisation.

The psychologist would first teach Leila a **relaxation technique**, such as slow controlled breathing or progressive muscle relaxation, so she can calm herself on demand. Next they would build a **fear hierarchy** together — a list of spider-related situations ranked from the **least** anxiety-provoking (for example, looking at a cartoon spider) to the **most** anxiety-provoking (for example, letting a live spider walk across her hand). Leila would then work **progressively up the hierarchy**: at each step she uses her relaxation technique to stay calm while facing that situation, and only moves up to the next step once she can face the current one **while remaining relaxed**. This works through **reciprocal inhibition** — because Leila cannot be deeply relaxed and highly anxious at the same time, pairing each feared situation with relaxation gradually replaces the fear response with a relaxation response. ∴ by climbing the hierarchy step by step while relaxed, Leila's phobic response to spiders is gradually replaced with calm.

Example 4 — unscaffolded

Tomas's father says, "I help my son with his phobia of dogs by always driving him the long way to school so he never has to walk past the neighbour's dog." Evaluate this approach with reference to the correct social intervention.

The father's approach is well-meaning but **counterproductive**, because it **encourages avoidance**. Avoiding the dog gives Tomas **immediate relief** from anxiety, which **negatively reinforces** the avoidance and, in the long term, **maintains** the phobia — Tomas never gets the chance to learn that the dog is safe, so his fear is never reduced. The correct social intervention, **psychoeducation for supporters**, teaches families to do the opposite: to **not encourage avoidance**, and instead to help Tomas **challenge his anxious thoughts** and to gently support **safe, graded** engagement with dogs while praising his efforts. ∴ rather than helping Tomas avoid the dog, his father should stop enabling avoidance and support graded exposure.

Practice questions

Scaffolded

Q1. Define, in the context of treating a specific phobia: (a) an evidence-based intervention; (b) the biopsychosocial approach; (c) a fear hierarchy.

Q2. For each intervention below, state whether it is biological, psychological or social: (a) breathing retraining; (b) cognitive behavioural therapy; (c) psychoeducation for families.

Q3. Benzodiazepines are short-acting anti-anxiety agents. (a) Name the neurotransmitter whose action a benzodiazepine enhances. (b) State whether a benzodiazepine is an agonist or an antagonist of that neurotransmitter. (c) State the effect of increasing this neurotransmitter's activity on the post-synaptic neuron.

Q4. Systematic desensitisation is carried out in three steps. (a) State what the client does in step 1. (b) State what is constructed in step 2. (c) State what the client does in step 3.

Q5. CBT has a cognitive component and a behavioural component. (a) Give an example of an unhelpful thought that the cognitive component would target in a person with a phobia of flying. (b) State what the behavioural component aims to change. (c) State one reason CBT's benefits tend to last.

Q6. A parent asks how they can help their child, who has a specific phobia. (a) Name the social intervention that would teach the parent how to help. (b) State one helpful action it recommends regarding the child's thoughts. (c) State one thing the parent should **not** do, and explain why.

Un scaffolded

- Q7.** Distinguish between a biological and a psychological intervention for specific phobia, giving one example of each. (2 marks)
- Q8.** Elena has a specific phobia of enclosed spaces and is prescribed a single dose of a short-acting benzodiazepine to take before a required MRI scan. Explain how the drug will reduce her anxiety during the scan, referring to GABA and its effect on post-synaptic neurons. (3 marks)
- Q9.** Benzodiazepines are effective, but are usually prescribed only for short-term use. Explain one limitation of benzodiazepines that supports this. (2 marks)
- Q10.** Explain how breathing retraining helps a person manage the fear response, and state why it is classified as a biological intervention. (2 marks)
- Q11.** Explain how cognitive behavioural therapy is used to treat a specific phobia. Refer to **both** the cognitive strand and the behavioural strand. (3 marks)
- Q12.** A student writes: “In systematic desensitisation the client is exposed to the most frightening situation first, so they get used to it quickly.” Identify and correct the error in this statement. (2 marks)
- Q13.** Explain the role of relaxation in systematic desensitisation, with reference to reciprocal inhibition. (3 marks)
- Q14.** Cognitive behavioural therapy and systematic desensitisation are both psychological interventions for specific phobia. Distinguish between them in terms of what each one changes and how each is carried out. (3 marks)
- Q15.** Ava is being treated for a specific phobia of injections. Her plan includes: (i) a short-acting benzodiazepine before a required blood test; (ii) challenging her catastrophic thought that “I will faint and die”; (iii) her sister learning not to cancel medical appointments on Ava’s behalf. Classify each part as biological, psychological or social, and name the type of intervention each represents. (3 marks)
- Q16.** Evaluate the use of benzodiazepines as a treatment for specific phobia. (4 marks)
- Q17. Research scenario.** A clinical psychologist tested whether systematic desensitisation reduces phobic anxiety. Eighteen adults with a specific phobia of snakes rated their anxiety on a scale of 0–100 while watching a snake in a sealed glass tank, both before and after six weeks of systematic desensitisation. The mean rating fell from 88 before treatment to 41 after. (a) Identify the independent variable and the dependent variable. (b) The study had no control group. Explain one problem this creates for concluding that the treatment *caused* the fall in anxiety. (c) Name one ethical consideration the psychologist should address, given the distress involved. (4 marks)
- Q18. Research scenario.** Sixty children with a specific phobia of deep water were all given the same eight-session systematic desensitisation program at a swim school. The families of half the children, chosen at random, also attended three psychoeducation sessions; the other families attended none. Three months after the program ended, the children whose families had attended psychoeducation reported lower average anxiety in the water than those whose families had not. (a) Explain, with reference to what psychoeducation teaches supporters, why attending the sessions could produce this difference. (b) Explain why the researcher decided at random which families attended the sessions. (4 marks)
- Q19.** Explain how psychoeducation for families supports the treatment of a specific phobia. In your answer, refer to **both** of the recommended actions. (4 marks)
- Q20. Extended response.** Ruby, 17, has a specific phobia of dogs that is severe enough to stop her walking to school or visiting friends who own a dog. Using the biopsychosocial approach, describe one evidence-based intervention at **each** of the biological, psychological and social levels that could be used to treat Ruby’s phobia, and justify why a combined approach is likely to be more effective than any single intervention on its own. (6 marks)
-

Answers

Q1. (a) A treatment shown by research to be effective. (b) Treating the phobia at three levels at once — biological, psychological and social. (c) A ranked list of situations involving the feared stimulus, ordered from least to most anxiety-provoking. **Q2.** (a) Biological. (b) Psychological. (c) Social. **Q3.** (a) GABA. (b) Agonist. (c) It increases inhibition, making the post-synaptic neuron less likely to fire. **Q4.** (a) Learns a relaxation technique. (b) A fear hierarchy (least → most anxiety-provoking). (c) Works progressively up the hierarchy, staying relaxed at each step. **Q5.** (a) e.g. “The plane will definitely crash.” (b) Maladaptive behaviours, especially avoidance. (c) It targets the thoughts and behaviours that maintain the phobia (a cause), so change tends to last. **Q6.** (a) Psychoeducation for families/supporters. (b) Help the child challenge unrealistic/anxious thoughts. (c) Do not encourage avoidance, because avoidance gives short-term relief that maintains the phobia. **Q7.** Biological targets the body/physiology (e.g. a benzodiazepine); psychological targets thoughts and behaviour (e.g. CBT). **Q8.** Benzodiazepine = GABA agonist → enhances GABA’s inhibitory action → post-synaptic neurons less likely to fire → lower arousal → Elena feels less anxious in the scanner. **Q9.** Repeated use leads to tolerance and dependence (and it treats symptoms, not the cause), so it is short-term only. **Q10.** It teaches slow, controlled breathing that reduces the physiological arousal (hyperventilation) of the fear response; biological because it acts directly on the body. **Q11.** Cognitive strand: identify and challenge unrealistic/catastrophic thoughts and replace them with realistic appraisals. Behavioural strand: change maladaptive behaviours, especially avoidance, through graded tasks. Together they remove the thoughts and behaviours that maintain the phobia. **Q12.** Error: the client starts with the *least* frightening situation and works *gradually up* a hierarchy while relaxed — not the most frightening first. **Q13.** Relaxation is paired with each feared step; via reciprocal inhibition a person cannot be relaxed and anxious at once, so relaxation replaces the fear response. **Q14.** CBT changes thoughts *and* behaviours, using discussion of catastrophic thinking plus graded behavioural tasks; systematic desensitisation changes the learned fear response only, by pairing relaxation with each step of a fear hierarchy (counterconditioning). **Q15.** (i) Biological — benzodiazepine (GABA agonist). (ii) Psychological — CBT (cognitive component). (iii) Social — psychoeducation for supporters. **Q16.** Strength: fast, effective short-term relief of arousal. Limitation: treats symptoms not the cause, and risks tolerance/dependence. Judgement: useful for short-term/acute relief but not a stand-alone cure. **Q17.** (a) IV = whether systematic desensitisation had been given (before vs after treatment); DV = rated anxiety (0–100). (b) With no control group, the fall could be due to another factor (e.g. repeated exposure to the snake, passage of time, placebo), so causation cannot be firmly concluded. (c) e.g. informed consent, minimising harm/distress, right to withdraw. **Q18.** (a) Psychoeducation teaches the family to stop encouraging avoidance and to help challenge the child’s anxious thoughts, so those families support the graded exposure instead of undoing it. (b) Random allocation spreads participant-related differences evenly across the two conditions, so the groups start out similar and the difference can be attributed to the psychoeducation. **Q19.** It teaches supporters to (1) help challenge the person’s unrealistic/anxious thoughts and (2) not encourage avoidance; both reinforce therapy and stop the family maintaining the phobia. **Q20.** Model response given in the solutions.

Fully-worked solutions

Q1. (a) An **evidence-based intervention** is a treatment that **research has shown to be effective**. (b) The **biopsychosocial approach** treats the phobia at **three levels at once** — **biological** (the body/physiology), **psychological** (thoughts, learning and behaviour) and **social** (relationships and environment). (c) A **fear hierarchy** is a **ranked list of situations** involving the feared stimulus, ordered from the **least** to the **most** anxiety-provoking, used to guide systematic desensitisation.

Q2. (a) **Biological** — breathing retraining acts on the body’s arousal. (b) **Psychological** — CBT targets thoughts and behaviour. (c) **Social** — psychoeducation works through the family/social environment.

Q3. (a) The neurotransmitter is **GABA** (gamma-aminobutyric acid). (b) A benzodiazepine is an **agonist** — it enhances GABA’s action. (c) Increasing GABA activity **increases inhibition**, making the post-synaptic neuron **less likely to fire** an action potential.

Q4. (a) In **step 1** the client **learns a relaxation technique** (such as controlled breathing or progressive muscle relaxation). (b) In **step 2** a **fear hierarchy** is constructed — situations ranked from least to most anxiety-provoking. (c) In **step 3** the client **works progressively up the hierarchy**, using relaxation to stay calm at each step and moving up only once the current step can be faced calmly.

Q5. (a) An example is the **catastrophic thought** “the plane will definitely crash” (or “I will lose control and panic”). (b) The behavioural component aims to change **maladaptive behaviours**, especially **avoidance** (e.g. never flying). (c) CBT’s benefits tend to last because it targets the **thoughts and behaviours that maintain the phobia** — that is, a cause of the problem — rather than just relieving symptoms.

Q6. (a) The intervention is **psychoeducation for families/supporters**. (b) A helpful action is to **help the child challenge unrealistic or anxious thoughts**, supporting realistic appraisals. (c) The parent should **not encourage avoidance** of the feared stimulus, because avoidance gives the child **short-term relief that negatively reinforces the avoidance and maintains the phobia** in the long term.

Q7. A **biological** intervention targets the **body/physiology** of the fear response — for example, a **short-acting benzodiazepine** (which reduces arousal) or **breathing retraining**. A **psychological** intervention targets the **thoughts and behaviours** that maintain the phobia — for example, **CBT** or **systematic desensitisation**. The two differ in what they act on (body versus thoughts/behaviour).

Q8. **GABA** is the brain’s **main inhibitory** neurotransmitter: when it binds to a post-synaptic neuron it makes that neuron **less likely to fire**. The benzodiazepine Elena takes is a **GABA agonist**: it **mimics and enhances** GABA’s action at its receptors, so the **inhibition** of post-synaptic neurons **increases** and overall neural excitation falls. This reduces the **physiological arousal** of her fear response (racing heart, rapid breathing, muscle tension) while she is inside the scanner, which Elena experiences as **reduced anxiety**. Because it is **short-acting**, it gives relief for the scan only — it does not remove her phobia of enclosed spaces.

Q9. With **repeated use** the person develops **tolerance** (needing more for the same effect) and can become **physically and psychologically dependent**; the drug also treats only the **symptoms** and not the underlying fear. Because of the dependence risk, benzodiazepines are prescribed for **short-term** use only.

Q10. The fear response produces rapid, shallow over-breathing (hyperventilation). Breathing retraining **teaches the person a slow, controlled breathing technique** that they deliberately use to **reduce the physiological arousal** of the fear response and regain calm. It is **biological** because it acts **directly on the body’s arousal** rather than on thoughts or behaviour.

Q11. **CBT** treats a phobia by working on both the thoughts and the behaviours that keep it going. In the **cognitive** strand the therapist helps the client **identify and challenge the unrealistic thoughts** behind the fear — especially **catastrophic thinking** (over-estimating the danger, e.g. “the dog will certainly bite me”) — and **replace them with realistic appraisals** of how likely harm actually is. In the **behavioural** strand the therapist helps the client **change the maladaptive behaviours** that maintain the phobia, above all **avoidance**, usually through **graded tasks** in which the client tests a feared prediction and **learns that the feared outcome does not occur**. Because CBT changes a **cause** of the phobia — the thoughts and behaviours maintaining it — rather than just relieving symptoms, its benefits tend to **last** after therapy ends.

Q12. The statement is **incorrect**. In systematic desensitisation the client starts with the **least** frightening situation on the fear hierarchy and works **gradually up** it, using relaxation to stay calm at each step and only moving up when the current step can be faced calmly. Being exposed to the **most** frightening situation first is the **opposite** of the graded approach, and is not how systematic desensitisation works.

Q13. Relaxation is **paired with each step** of the fear hierarchy as the client is exposed to the feared situation. This works through **reciprocal inhibition** — a person **cannot be deeply relaxed and highly anxious at the same time**. By staying relaxed while facing each situation, the client’s **fear response is gradually replaced by a relaxation response** (counterconditioning), step by step up the hierarchy.

Q14. **What each changes:** CBT changes **both the thoughts and the behaviours** that maintain the phobia — it targets **catastrophic thinking** as well as **avoidance**. **Systematic desensitisation** changes the **learned fear response** itself, replacing it with a relaxation response; it does not directly work on the client’s beliefs. **How each is carried out:** CBT is delivered mainly through **discussion and thought-testing** (identifying an unrealistic thought, examining the evidence, substituting a realistic appraisal) supported by **graded behavioural tasks**; systematic desensitisation follows a fixed **three-step behavioural procedure** — learn a relaxation technique, build a **fear hierarchy**, then work **up** it while staying relaxed, so that **reciprocal inhibition** gradually replaces fear with calm.

Q15. (i) The benzodiazepine is a **biological** intervention — a short-acting anti-anxiety agent (**GABA agonist**). (ii) Challenging the catastrophic thought “I will faint and die” is a **psychological** intervention — the **cognitive component of CBT**. (iii) The sister learning not to cancel appointments on Ava’s behalf is a **social** intervention — **psychoeducation for supporters** (stopping the enabling of avoidance).

Q16. Strength: benzodiazepines act **quickly to reduce physiological arousal and anxiety** (by enhancing GABA’s inhibitory effect), giving effective **short-term/acute relief** — useful, for example, before an unavoidable encounter with the feared stimulus. **Limitation:** they treat only the **symptoms** and not the **underlying learned fear**, so they do **not cure** the phobia, and with repeated use they cause **tolerance and dependence**. **Judgement:** benzodiazepines are useful for **short-term relief** but are **not a stand-alone cure**, and are best combined with psychological interventions that produce lasting change.

Q17. (a) The **independent variable** is **whether systematic desensitisation had been carried out** (the before-treatment vs after-treatment condition); the **dependent variable** is the participants’ **rated anxiety (0–100)** when watching the snake. (b) With **no control group**, there is nothing to compare the treated group against, so the fall from 88 to 41 **could be due to another factor** — for example, repeated exposure to the snake, the passage of time, or a placebo/expectation effect — rather than the treatment itself, so it is not valid to conclude the treatment **caused** the fall. (c) A relevant ethical consideration is **informed consent**, **minimising harm/distress**, or the **right to withdraw** (given that participants are deliberately exposed to a feared stimulus).

Q18. (a) **Psychoeducation** teaches families **about the phobia and how to respond helpfully** — in particular to **stop encouraging avoidance behaviours** and to **help the child challenge unrealistic or anxious thoughts**. Families who attended would therefore **stop helping their child avoid deep water** (keeping them out of the pool, making excuses), which would otherwise give **immediate relief** that **negatively reinforces** the avoidance and **maintains the phobia**; instead they would support the graded exposure the child practised in treatment. The untrained families could unintentionally undo the therapy, which is why their children’s anxiety was higher three months later. (b) Deciding **at random** which families attended is **random allocation**: it spreads **participant-related differences** (such as how severe each child’s phobia was, or how anxious the family already was about water) **evenly across the two conditions**, so the groups start out as similar as possible. The later difference in anxiety can then be attributed to the **psychoeducation** rather than to a pre-existing difference between the groups.

Q19. Psychoeducation for families teaches supporters about the phobia and how to help, in two specific ways. First, they learn to **help the person challenge unrealistic or anxious thoughts** — for example, gently questioning a catastrophic belief rather than agreeing the feared stimulus is very dangerous — which reinforces the realistic appraisals learned in therapy. Second, they learn to **not encourage avoidance behaviours**, because avoidance provides short-term relief that **negatively reinforces** it and **maintains the phobia**. By doing both, the family stops unintentionally maintaining the phobia and instead **supports the person’s therapy and graded exposure**.

Q20. Model response (6 marks). A biopsychosocial plan for Ruby would use one intervention at each level. **Biological:** Ruby’s GP could prescribe a **short-acting benzodiazepine** for **short-term** use before an unavoidable encounter with a dog; as a **GABA agonist** it enhances GABA’s inhibitory effect, reducing her physiological arousal and anxiety — though it relieves symptoms only and is not a cure. **Psychological:** a psychologist could use **systematic desensitisation**: Ruby first learns a relaxation technique, then builds a **fear hierarchy** of dog-related situations from least to most anxiety-provoking (e.g. from looking at a photo of a dog up to patting a calm dog), and works **gradually up** it while staying relaxed, so that — through **reciprocal inhibition** — her fear response is replaced by relaxation. **Social:** Ruby’s family receives **psychoeducation**, learning to **help her challenge her anxious thoughts** and to **stop encouraging avoidance** (for example, no longer driving her everywhere so she avoids dogs), instead supporting her graded exposure. **Justification:** a **combined** approach is likely to be more effective than any single intervention because each level addresses a different contributor: the benzodiazepine gives **short-term relief** so Ruby can begin treatment, systematic desensitisation produces **lasting change** by directly reducing the learned fear, and psychoeducation ensures her **environment supports** rather than undermines that change. Together they treat both the **symptoms and the causes** and help Ruby **maintain** her gains, which a single intervention on its own would be less likely to achieve. *(Full marks require: one correct, correctly classified intervention at each of the three levels, described accurately, plus an explicit justification of why combining the levels is more effective.)*

Topic 5 Test A — Multiple choice

Reading time: 5 minutes. Writing time: 25 minutes. 20 questions, 20 marks. No calculator, no notes. Choose the response that is correct or that best answers the question. A correct answer scores 1 mark; an incorrect answer scores 0. Marks are not deducted for incorrect answers.

Question 1

Considering mental wellbeing in terms of a person's *level of functioning* means considering:

- A. their ability to cope with, adapt to and recover from adversity
- B. the strength of their connections to family, community, culture and Country
- C. how well they carry out the day-to-day activities of life independently and effectively
- D. whether they have received a formal psychological diagnosis

Question 2

A severe bushfire season damaged Mei's family property and the family had to live elsewhere for six months. Mei found that time very hard, but she kept up her study routine, drew on her netball club and now says she would manage a setback like it better next time. Mei's response is best described as:

- A. resilience
- B. a high level of functioning
- C. social and emotional wellbeing
- D. self-determination

Question 3

In the social and emotional wellbeing (SEWB) framework, a person's connection to the land, waters and the place they belong to is the domain of:

- A. connection to community
- B. connection to culture
- C. connection to spirituality and ancestors
- D. connection to Country

Question 4

Which statement best reflects the idea that mental wellbeing exists on a continuum?

- A. A person is either mentally healthy or has a mental disorder, with nothing in between.
- B. A person's wellbeing can lie anywhere on a scale from high to low and can change over time.
- C. A person's wellbeing is fixed from birth and does not change over time.
- D. A person's wellbeing is determined only by whether they have a diagnosis.

Question 5

Which of the following is an example of an **internal** factor influencing a person's position on the mental wellbeing continuum?

- A. a genetic predisposition to anxiety
- B. the amount of social support available to them
- C. a recent bereavement
- D. ongoing financial hardship

Question 6

Compared with everyday stress, a specific phobia is best distinguished by the fact that it:

- A. is always shorter in duration
- B. is a normal, adaptive response that aids performance
- C. is never linked to a specific object or situation
- D. involves persistent, intense fear that causes significant impairment

Question 7

Support from family, friends and community protects mental wellbeing most strongly when it has two particular qualities. Those qualities are that the support is:

- A. frequent and long-lasting
- B. authentic and energising
- C. professional and structured
- D. large in number and easily available

Question 8

Which statement best captures how mindfulness meditation differs from simply relaxing?

- A. Mindfulness aims only to produce a calm, tension-free state.
- B. Mindfulness can only be practised by a person who already has a mental disorder.
- C. Mindfulness involves present-moment, non-judgemental awareness, even of unpleasant feelings.
- D. Mindfulness is a biological protective factor rather than a psychological one.

Question 9

Which of the following is a **biological** protective factor for maintaining mental wellbeing?

- A. keeping a regular bedtime so that eight hours' sleep is the norm
- B. writing down an anxious thought and testing whether the evidence supports it
- C. noticing a worry as it arises and letting it pass without judging it
- D. a weekly catch-up with a friend you can be honest with

Question 10

A community runs regular on-Country camps at which senior members teach young people language, seasonal knowledge and cultural practice, so that these are carried on by the next generation. Which cultural determinant does this best illustrate, and why?

- A. Self-determination, because decisions are being made about how young people spend their holidays
- B. A social determinant of health, because it improves young people's education outcomes
- C. Resilience, because it helps young people recover from adversity
- D. Cultural continuity, because culture is being kept strong and handed on across the generations

Question 11

Self-determination, as a cultural determinant of the wellbeing of Aboriginal and Torres Strait Islander peoples, is best described as:

- A. the passing on of culture across the generations
- B. genuine control, choice and decision-making power over one's own life, community and affairs
- C. the social and economic conditions that shape a person's health
- D. the seven domains of connection recognised in the SEWB framework

Question 12

GABA is the brain's main inhibitory neurotransmitter. A dysfunction in which too little GABA is produced, or GABA is received ineffectively, would be expected to:

- A. increase the inhibition of postsynaptic neurons, reducing arousal
- B. block the action of all excitatory neurotransmitters
- C. leave neurons inadequately inhibited, producing heightened physiological arousal
- D. have no effect on the fear response

Question 13

Long-term potentiation contributes to a specific phobia because the repeated activation of a fear pathway:

- A. strengthens the neural connections so the fear is triggered more easily and strongly
- B. weakens the neural connections so the fear fades
- C. replaces the fear response with a relaxation response
- D. reduces the amount of GABA released at the synapse

Question 14

According to the two-factor learning model of specific phobia, the phobia is:

- A. precipitated by operant conditioning and perpetuated by classical conditioning
- B. both precipitated and perpetuated by classical conditioning
- C. both precipitated and perpetuated by operant conditioning
- D. precipitated by classical conditioning and perpetuated by operant conditioning

Question 15

Corey has a specific phobia of wasps. He remembers the single sting he received as a small child as “the worst pain of my life” and is certain the wasp “came straight for me”, although his parents recall a minor sting that he barely reacted to at the time. Corey’s way of remembering is best described as:

- A. catastrophic thinking
- B. memory bias
- C. negative reinforcement
- D. long-term potentiation

Question 16

A person avoids seeking help for their phobia because they fear being judged or seen as weak. This is an example of a factor that:

- A. is biological and precipitates the phobia
- B. is psychological and precipitates the phobia
- C. is social and helps perpetuate the phobia
- D. is social and helps precipitate the phobia

Question 17

Short-acting benzodiazepines reduce the anxiety of a person with a specific phobia because they act as:

- A. GABA antagonists that block GABA’s inhibitory effect
- B. agents that increase overall neural excitation
- C. a permanent cure for the underlying learned fear
- D. GABA agonists that enhance GABA’s inhibitory effect

Question 18

In systematic desensitisation, the client:

- A. works gradually up a fear hierarchy while using relaxation to stay calm
- B. is exposed to the most feared situation immediately and intensely
- C. is prescribed a benzodiazepine to take at each step
- D. is taught to avoid the feared stimulus permanently

Question 19

Psychoeducation for the family of a person with a specific phobia recommends that supporters:

- A. help the person avoid the feared object whenever possible
- B. agree with the person that the feared object is genuinely very dangerous
- C. not encourage avoidance, and help the person challenge anxious thoughts
- D. avoid discussing the phobia with the person at all

Question 20

Breathing retraining teaches a person a slow, controlled breathing technique to reduce the racing heart and rapid breathing of the fear response. It is classified as a **biological** intervention because it:

- A. changes the person's unhelpful thoughts
- B. acts directly on the body's physiological arousal
- C. works through the person's family and social environment
- D. relies on classical conditioning to replace fear with relaxation

End of Topic 5 Test A

Test A — solutions

Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	C	6	D	11	B	16	C
2	A	7	B	12	C	17	D
3	D	8	C	13	A	18	A
4	B	9	A	14	D	19	C
5	A	10	D	15	B	20	B

Q1. C — level of functioning is how well a person carries out day-to-day activities independently and effectively; A is resilience, B is SEWB and D is diagnosis.

Q2. A — coping with, adapting to and recovering from adversity so that positive functioning is restored is resilience; B describes how she manages daily activities, C is the holistic framework used by and for Aboriginal and Torres Strait Islander peoples, and D is control and choice over one's own affairs.

Q3. D — connection to Country is the connection to the land, waters and place a person belongs to; the other options name different SEWB domains.

Q4. B — a continuum is a graded scale on which wellbeing can lie at any point and change over time; A and D describe fixed categories and C denies change.

Q5. A — a genetic predisposition originates within the person (internal); social support, bereavement and financial hardship all arise from the environment (external).

Q6. D — a phobia is a diagnosable disorder marked by persistent, intense fear and significant impairment; it is not shorter, adaptive, or unlinked to an object.

Q7. B — protective social support is authentic (genuine, so the person can be themselves) and energising (leaving them lifted rather than drained); the other options describe quantity or formality, not quality.

Q8. C — mindfulness is present-moment, non-judgemental awareness (even of unpleasant experience); relaxation aims only at calm, and mindfulness is a psychological factor open to anyone.

Q9. A — adequate sleep meets a body need, so it is biological; B is a cognitive behavioural strategy and C is mindfulness meditation (both psychological), and D is social support.

Q10. D — culture being taught and carried on by the next generation is cultural continuity; A misreads deciding a program's activities as self-determination, B names the wrong category of determinant, and C describes recovery from adversity, not the handing on of culture.

Q11. B — self-determination is genuine control, choice and decision-making power over one's own affairs; A is cultural continuity, C is social determinants and D is SEWB.

Q12. C — with too little or ineffective GABA, neurons are not adequately inhibited, so the fear response is not dampened and arousal is heightened.

Q13. A — LTP strengthens the repeatedly activated fear pathway, so the fear is later triggered more easily and strongly; it does not weaken pathways or reduce GABA.

Q14. D — classical conditioning acquires (precipitates) the fear and operant conditioning maintains (perpetuates) it through negatively reinforced avoidance.

Q15. B — memory bias is remembering phobia-relevant events as more threatening or more frequent than they actually were, so it distorts the *past*; catastrophic thinking concerns the imagined worst outcome of a *future* encounter, C explains why avoidance is repeated and D is the neural strengthening of the fear pathway.

Q16. C — stigma around seeking help is a social factor that stops a person accessing treatment, so it perpetuates (maintains) the phobia; it does not precipitate it.

Q17. D — benzodiazepines are GABA agonists that mimic and enhance GABA's inhibitory effect, lowering arousal; they do not block GABA or cure the learned fear.

Q18. A — systematic desensitisation is gradual: the client climbs a fear hierarchy while staying relaxed; exposure to the worst situation first describes flooding.

Q19. C — psychoeducation teaches supporters to stop enabling avoidance and to help challenge anxious thoughts; encouraging avoidance or agreeing the object is dangerous would maintain the phobia.

Q20. B — breathing retraining acts directly on the body's physiological arousal, which is why it is biological rather than psychological or social.

Topic 5 Test B — Short answer

Writing time: 35 minutes. Total 30 marks. No calculator, no notes. Answer all questions. Where more than one mark is available, full marks require the depth the command term and mark allocation ask for.

Question 1 (4 marks)

Since her mother's hospitalisation three months ago, Georgia (Year 12) has taken on the school run and most of the cooking for her younger brothers. She has still submitted every assignment on time, kept her weekend job and trained with her netball side each week. When her wellbeing coordinator asks how she is, Georgia says she has felt flat and exhausted for weeks.

- a. On the evidence above, Georgia's *level of functioning* appears high. Explain what her level of functioning does, and does not, tell the coordinator about her mental wellbeing. 2 marks
- b. The coordinator also describes Georgia as *resilient*. Explain what resilience refers to and how it differs from level of functioning. 2 marks

Question 2 (4 marks)

Since a restructure at work, Bianca has had a heavier workload and a two-hour daily commute. She has always been a worrier. For the past month she has felt tense most evenings and has slept poorly, although she is still meeting her deadlines and has not been diagnosed with any condition.

- a. Identify one internal factor and one external factor influencing Bianca's mental wellbeing, and justify each classification. 2 marks
- b. Bianca tells a friend she has "developed a phobia of work". Explain why her experience is better described as anxiety than as a specific phobia, and state what this suggests about her position on the mental wellbeing continuum. 2 marks

Question 3 (4 marks)

A community health service runs a "Stay Well" program with three components: (i) a cooking group that teaches members to prepare cheap, balanced meals and to keep up their water intake through the day; (ii) a weekly session in which members write down an unhelpful thought, weigh the evidence for it and rewrite it in more balanced terms; (iii) a walking group in which each member is paired with someone they can talk to honestly and who leaves them feeling lifted.

- a. Classify each component as a biological, psychological or social protective factor, and name the protective factor it represents. 3 marks
- b. Explain what makes the connection built in component (iii) an **authentic** one. 1 mark

Question 4 (4 marks)

a. An Aboriginal community-controlled organisation designs, governs and staffs its own youth wellbeing program. A very similar program in a neighbouring town, designed and run by an outside agency, has much lower attendance. Explain, with reference to **self-determination**, why the community-controlled program is more likely to succeed. 2 marks

- b. Explain how **cultural continuity** helps to maintain wellbeing, and why cultural determinants are described as integral to wellbeing rather than as an optional extra. 2 marks

Question 5 (4 marks)

As a child, Hana was in a car that was stopped for almost an hour inside a road tunnel after a crash ahead. She remembers feeling trapped and unable to get enough air. She now adds twenty minutes to every trip so she can take the surface route, and the tightness in her chest eases the moment she takes the exit before the tunnel.

- a. Using the two-factor learning model, name the process that **precipitated** Hana's phobia and the process that **perpetuates** it, and explain how each works in her case. 2 marks

- b. Hana says, “If I drive into that tunnel it will collapse and I will suffocate.” Explain why this thought *perpetuates* her phobia rather than *causing* it. 2 marks

Question 6 (4 marks)

A psychologist compared two evidence-based interventions for a specific phobia of heights. Thirty-six adults were randomly allocated to one of two groups. Group 1 completed eight weeks of cognitive behavioural therapy (CBT); Group 2 completed eight weeks of breathing retraining. Each participant rated their anxiety from 0 (none) to 100 (extreme) while standing on a glass-floored viewing platform, at the end of treatment and again six months later.

Group (n = 18)	Mean anxiety rating (0–100) at end of treatment	Mean anxiety rating (0–100) at six-month follow-up
1 — cognitive behavioural therapy	36 ($\pm$ 8)	33 ($\pm$ 9)
2 — breathing retraining	45 ($\pm$ 9)	58 ($\pm$ 11)

Figures in brackets are standard deviations.

- a. Identify the independent variable and the dependent variable in this investigation. 2 marks
- b. With reference to how each intervention works, explain why the gap between the two groups was much larger at the six-month follow-up than at the end of treatment. 2 marks

Question 7 (6 marks)

Isla, 17, has a specific phobia of escalators. When she was six her shoelace caught at the top of a shopping-centre escalator and she fell and was badly grazed. She now walks to the far end of any centre to find the lifts, and the knot in her stomach loosens as soon as she is away from the escalator. She insists she has “seen loads of people hurt on escalators”, although the only incident she can actually describe is her own. Isla has told no one at school, because she is sure they would think she was “pathetic”. Her psychologist notes that Isla has been an anxious child since infancy and that reduced GABA activity runs in her family.

Using the biopsychosocial approach, explain the development and continuation of Isla’s specific phobia. Identify at least one biological, one psychological and one social factor; make clear which factors helped **precipitate** the phobia and which help **perpetuate** it; and account for the place of Isla’s reduced GABA activity in your explanation.

End of Topic 5 Test B

Test B — solutions

Q1. (a) Level of functioning considers wellbeing by looking at **how well a person carries out their day-to-day activities** — study, work, relationships and self-care — **independently and effectively**. On that measure Georgia is doing well: she is meeting every deadline, holding down a job and still training weekly, all while taking on a caring role, so she is showing **high functioning**, which would ordinarily point to **higher** wellbeing. What it does **not** tell the coordinator is **how Georgia feels**. Level of functioning is an **observable indicator**, not the whole of wellbeing, and a person can keep their outward routines running while their wellbeing is low. Georgia's report of feeling **flat and exhausted for weeks** is exactly the evidence that would be missed if functioning were the only consideration used, which is why it is one way of considering wellbeing rather than the only one. **(b) Resilience** refers to a person's ability to **cope with and manage change, uncertainty and adversity**, and to **adapt and recover** so that positive functioning is restored. Calling Georgia resilient is a claim about her **capacity** to handle a sudden, difficult change — her mother's hospitalisation — and to come through it. Level of functioning, by contrast, is a **snapshot of what she is managing right now**. The two answer different questions: *how is she coping day to day at the moment?* versus *how well can she adapt and bounce back when that capability is put under strain?* A person can be functioning well without ever having been tested by adversity, and a person whose functioning has temporarily dropped can still be highly resilient.

Q2. (a) The **internal** factor is Bianca's **long-standing tendency to worry** — a characteristic of Bianca herself, originating **within** her rather than in her circumstances. The **external** factor is the **work restructure**, which has given her a **heavier workload and a two-hour daily commute** — a change in her **environment and circumstances**, arising outside her. **(b) Anxiety** is a state of **heightened arousal and apprehension** about something that **might** go wrong; it is a **normal** response that is **not in itself diagnosable**, and in mild forms it can even be adaptive. A **specific phobia** is a **diagnosable mental disorder** — a **persistent, intense and irrational** fear of a **particular object or situation**, out of proportion to the actual danger, that drives **avoidance** and causes **significant impairment**. Bianca's tension is a proportionate response to a genuinely demanding workload, she is **still meeting her deadlines** (no significant impairment) and she is **not avoiding** work, so her experience does not meet the criteria for a phobia. This places her **toward the middle of the mental wellbeing continuum** — in the **mental health problem** region rather than at the mental disorder end.

Q3. (a) Component **(i)** is a **biological** protective factor — **adequate nutritional intake and hydration** (it meets the body's needs). Component **(ii)** is a **psychological** protective factor — **cognitive behavioural strategies** (identifying an unhelpful thought and reframing it into a more balanced one). Component **(iii)** is a **social** protective factor — **support from family, friends and community that is authentic and energising**. **(b)** The connection is **authentic** because the member can be **honest and be their true self** with their walking partner, rather than **putting on a front** — the relationship is **genuine** rather than performed.

Q4. (a) Self-determination means a community **holding the control, the choice and the decision-making power over its own affairs**. In the community-controlled program the community itself **sets the priorities, governs the organisation and staffs the program**, so it is run **by and for** the people it serves and is shaped to their needs, values and ways of working. That control is **empowering in itself** — it gives **agency and ownership** — and it builds the **trust** an externally designed program cannot, which is why more young people attend and why the program is more likely to work. The neighbouring program may deliver the same content, but the community has **no say** in it. **(b) Cultural continuity** is the **passing on and maintenance of culture across the generations** — language, knowledge, identity and practice being **kept strong and handed on**. Where continuity is strong, people have an **unbroken, secure sense of identity and belonging**, which **protects** wellbeing and supports recovery from adversity. Because **connection to and strength of culture sits at the foundation of the holistic SEWB framework**, strengthening cultural determinants supports wellbeing across **every domain of that framework at once**. They are therefore **integral to how wellbeing is maintained** — part of the foundation — rather than an optional addition to it.

Q5. (a) The phobia was **precipitated by classical conditioning**: the road tunnel was a **neutral stimulus** until it was **paired** with being trapped for an hour and struggling to breathe, which produced intense fear; through that **association** the tunnel became a **conditioned stimulus** that now triggers **fear** (a conditioned response) on its own. It is **perpetuated by operant conditioning**: taking the surface route **removes Hana's anxiety** — the tightness in her chest eases the moment she takes the exit — and that relief **negatively reinforces** the twenty-minute detour, so she repeats it every trip and **never has the experience** that would show the tunnel is safe. **(b)** The thought is **catastrophic thinking** — a **cognitive bias** in which the person **overestimates the danger** and pictures the **worst possible outcome**. It operates on a phobia that **already exists**: it keeps Hana's **anxiety high** and makes the detour feel

necessary, so it **maintains (perpetuates)** the fear. What actually **caused** the phobia was the **learning experience in the tunnel** — a direct environmental trigger acquired through classical conditioning. The belief formed **afterwards**, so it cannot be the phobia's original cause.

Q6. (a) The **independent variable** is the **type of intervention completed** (eight weeks of CBT versus eight weeks of breathing retraining); the **dependent variable** is each participant's **self-reported anxiety rating (0–100)** while standing on the glass-floored platform. **(b)** CBT works on the **thoughts and behaviours that keep the phobia going**: it helps the client **identify and challenge catastrophic thoughts** about heights and replace them with **realistic appraisals**, and it **reduces avoidance** through graded tasks in which a feared prediction is tested and **not confirmed**. Because CBT changes a **cause** of the phobia, the improvement **holds** after the sessions stop — Group 1 sat at a mean of **36** at the end of treatment and **33** six months later. **Breathing retraining** is a **biological coping skill**: slow, controlled breathing lowers the **physiological arousal** of the fear response **while it is being used**, but it leaves the **learned fear** and the **avoidance** untouched. Once the program ended and practice fell away, Group 2 had nothing that **disconfirmed** the fear, so their mean anxiety **drifted back up** from **45** to **58** and the gap between the groups widened from 9 points to 25. Group 2's follow-up scores are also the **most spread** (± 11), meaning their responses were the **least consistent**.

Q7. Model response (6 marks). Isla's specific phobia is best explained using the **biopsychosocial approach**. Her reduced GABA activity is a standing **biological vulnerability**; the fall precipitated the phobia; and several factors now perpetuate it.

A biological vulnerability that came first. Isla's **reduced GABA activity** is a **biological** factor, but it is neither a precipitating nor a perpetuating factor in the behavioural sense: it **pre-dates the fall** and has been present since infancy. **GABA** is the brain's **main inhibitory neurotransmitter**, so with reduced GABA activity Isla's neurons are **not adequately inhibited** and her fear response is **not dampened**, leaving her **more easily and more strongly** tipped into intense fear than most people. GABA dysfunction is one of the factors that **contribute to the development** of a specific phobia: it made a lasting phobia **more likely** after an incident many children would shrug off, rather than being the event that started it or the behaviour that keeps it going.

Precipitating factors. The **fall from the escalator**, a direct, frightening and painful experience, is a **specific environmental trigger** and therefore a **social** factor. It precipitated the phobia through **classical conditioning**, a **psychological** factor: the escalator, previously a **neutral stimulus**, was **paired** with the fall and the pain it caused, so **escalators became a conditioned stimulus** that now produce **fear** (a conditioned response) on their own. These processes **started** the phobia.

Perpetuating factors. Walking to the far end of the centre to use the lifts is **avoidance**, explained by **operant conditioning (psychological)**: the detour **removes her anxiety** — the knot in her stomach loosens straight away — and that relief **negatively reinforces** the avoidance, so she repeats it. Because she never rides an escalator, the fear is **never disconfirmed**. Her insistence that she has “seen loads of people hurt on escalators” when she can describe only her own fall is **memory bias**, a second **psychological** factor: remembering escalator-related events as **more frequent and more dangerous than they were** keeps the threat feeling real and makes the avoidance seem justified. **Socially**, the **stigma** Isla anticipates — that her friends would think her “pathetic” — stops her telling anyone or **seeking treatment**, so the phobia is left **untreated** and continues. **Biologically**, each fearful encounter with an escalator **repeatedly activates** the same fear pathway, and **long-term potentiation strengthens** those connections, so the fear is triggered **more easily and strongly** as time goes on.

$\therefore$ Isla's phobia was **precipitated** by a direct environmental trigger acquired through classical conditioning, acting on a **pre-existing biological vulnerability** (reduced GABA activity), and is **perpetuated** by negatively reinforced avoidance, memory bias, stigma that keeps her from treatment, and the long-term potentiation of the fear pathway — a genuinely biopsychosocial picture. *(Full marks require: at least one factor from each of the biological, psychological and social domains, correctly explained and tied to the scenario; a clear separation of precipitating from perpetuating factors; and reduced GABA activity treated as a pre-existing vulnerability contributing to the phobia's development rather than forced into either category.)*