

Exercise walk-through

Classical Conditioning ■ 3.7

eXercise

You must be able to

- label **US** 无条件刺激, **UR**, **CS** 条件刺激 and **CR** in an example
- describe **acquisition** 习得, **extinction** 消退 and **spontaneous recovery** 自发恢复
- distinguish **generalisation** 泛化 from **discrimination** 分化
- state what classical conditioning explains about emotional responses

Method — The four terms

An **unconditioned stimulus** produces a response naturally (food → salivation). Pair a **neutral stimulus** with it repeatedly and that stimulus becomes a **conditioned stimulus**, producing a **conditioned response** on its own.

Method — Three phases

Acquisition: the pairing that establishes the response. **Extinction:** presenting the CS without the US until the CR fades. **Spontaneous recovery:** the CR reappearing after a rest, showing extinction suppresses rather than erases.

Method — Generalisation and discrimination

Generalisation: similar stimuli also produce the response. **Discrimination:** learning to respond only to the specific CS and not to similar stimuli.

Method — Emotional learning

A neutral situation paired with a frightening event can come to produce fear by itself. This accounts for many learned fears and for why exposure — repeated CS without US — is used to reduce them.

Practice 2.1 ■ 2 marks

In a study where a tone precedes a puff of air to the eye, identify the CS and the CR.

Solution 2.1

Worked steps

CS: the tone **B1**; CR: blinking to the tone alone **B1**.

Practice 2.2 ■ 2 marks

Explain what spontaneous recovery shows about extinction.

Solution 2.2

Method: Three phases

Worked steps

the response returns after a rest without further pairing (B1), so extinction suppresses the response rather than erasing the learning (B1).

Practice 2.3 ■ 1 mark

A child bitten by a large dog becomes afraid of all dogs.

- (a) Name the process.
- (b) State the process by which the fear could be narrowed to that one dog.

Solution 2.3

Worked steps

(a) generalisation **B1**. (b) discrimination **B1**.

Exam-style 3.1 ■ 1 mark

Presenting the CS repeatedly without the US produces

- A** acquisition
- B** extinction
- C** generalisation
- D** spontaneous recovery

Solution 3.1

A acquisition

B extinction 

C generalisation

D spontaneous recovery

Worked steps

B. unreinforced presentation of the CS produces extinction.

Exam-style 3.2 ■ 1 mark

In the tone-and-air-puff example, the air puff is the

- A** conditioned stimulus
- B** unconditioned stimulus
- C** conditioned response
- D** neutral stimulus

Solution 3.2

- A** conditioned stimulus
- B** unconditioned stimulus
- C** conditioned response
- D** neutral stimulus



Worked steps

- B.** the air puff produces blinking naturally.

Exam-style 3.3 ■ 1 mark

A therapist treats a phobia by repeated safe exposure to the feared object.

- (a) Name the learning process being used.
- (b) Explain why the fear may briefly return later.

Solution 3.3

Method: Emotional learning

Worked steps

(a) extinction **B1**. (b) extinction suppresses rather than erases the association **B1**, so spontaneous recovery can return the response after time **B1**.