

3.7 Classical Conditioning

Name: _____ Class: _____ Date: _____

Total: 11 marks

KEY WORDS discrimination 分化 • extinction 消退 • spontaneous recovery 自发恢复 • generalisation 泛化
• acquisition 习得

Objective

Build the skills to answer exam questions on **classical conditioning** 经典条件作用.

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

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ 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.

■ 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.

■ Generalisation and discrimination

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

■ 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.

2 Practice

2.1 In a study where a tone precedes a puff of air to the eye, identify the CS and the CR. [2]

2.2 Explain what spontaneous recovery shows about extinction. [2]

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

(a) Name the process. [1]

(b) State the process by which the fear could be narrowed to that one dog. [1]

3 Exam-style questions

3.1 Presenting the CS repeatedly without the US produces [1]

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

3.2 In the tone-and-air-puff example, the air puff is the [1]

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

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

(a) Name the learning process being used. [1]

(b) Explain why the fear may briefly return later.

[2]

Solutions

2.1 CS: the tone; CR: blinking to the tone alone.

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

2.3 (a) generalisation. (b) discrimination.

3.1 B. unreinforced presentation of the CS produces extinction.

3.2 B. the air puff produces blinking naturally.

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