

Exercise walk-through

Introduction to Memory ■ 2.3

eXercise

You must be able to

- name the three stages and state what each does
- distinguish **sensory** 感觉, **short-term** 短时 and **long-term** 长时 memory by capacity and duration
- explain what **working memory** 工作记忆 adds to the model
- distinguish **explicit** 外显 from **implicit** 内隐 memory

Method — Three processes

Encoding gets information in, **storage** holds it, **retrieval** gets it back out. A failure at any one of the three looks like forgetting, and telling them apart is most of the work.

Method — Three stores

Sensory memory holds a large amount for under a second. **Short-term memory** holds about seven items for about twenty seconds without rehearsal. **Long-term memory** has no known practical limit and can last a lifetime.

Method — Working memory

Working memory is short-term memory treated as an active workspace: it holds information **and manipulates it**, with separate handling of verbal and visual material under a central control.

Method — Explicit and implicit

Explicit memory is consciously recalled — facts and events. **Implicit** memory shows up in performance without conscious recall — skills, conditioned responses.

Practice 2.1 ■ 3 marks

Name the three memory processes and state what each does.

Solution 2.1

Worked steps

encoding — getting information in **B1**; storage — holding it **B1**; retrieval — getting it back out **B1**.

Practice 2.2 ■ 2 marks

State the approximate capacity and duration of short-term memory.

Solution 2.2

Worked steps

about seven items **B1**; about twenty seconds without rehearsal **B1**.

Practice 2.3 ■ 1 mark

A person rides a bicycle after ten years without being able to describe how.

- (a) Name the type of memory involved.
- (b) State how it differs from explicit memory.

Solution 2.3

Method: Explicit and implicit

Worked steps

(a) implicit (procedural) memory **B1**. (b) it appears in performance without conscious recall, whereas explicit memory is consciously retrieved **B1**.

Exam-style 3.1 ■ 1 mark

Working memory differs from short-term memory mainly because it

- A** lasts longer
- B** manipulates information as well as holding it
- C** has unlimited capacity
- D** is unconscious

Solution 3.1

Method: Working memory

- A lasts longer
- B manipulates information as well as holding it 
- C has unlimited capacity
- D is unconscious

Worked steps

B. working memory is an active workspace, not only a store.

Exam-style 3.2 ■ 1 mark

Sensory memory is best described as

- A** small capacity, long duration
- B** large capacity, very brief duration
- C** unlimited capacity, unlimited duration
- D** conscious and effortful

Solution 3.2

Method: Three stores

- A small capacity, long duration
- B large capacity, very brief duration**
- C unlimited capacity, unlimited duration
- D conscious and effortful



Worked steps

B. sensory memory holds a great deal for under a second.

Exam-style 3.3 ■ 1 mark

A student can recognise a correct answer but cannot produce it unaided.

- (a) State which process has failed.
- (b) Explain how the test format changes the difficulty.

Solution 3.3

Worked steps

(a) retrieval **B1**. (b) recognition supplies the cue directly **B1**, while recall requires generating it, which needs a stronger retrieval path **B1**.