# 1.2 The cognitive approach

Name: _____ Class: _____ Date: _____ **Total: 30 marks**

**KEY WORDS** cognitive approach • multi-store model • working memory model • schema • reconstructive memory • anchoring bias • leading question • flashbulb memory

## Objective

Build the skills to answer exam questions on the **cognitive approach** : models of memory, **schemas** and reconstructive memory, thinking and decision-making with heuristics and biases, and the reliability of memory, including emotion and flashbulb memory.

**You must be able to:**

- describe the multi-store model and the working memory model and the evidence for each
- explain how schemas lead to reconstructive memory (Bartlett, 1932)
- explain System 1 and System 2 thinking, anchoring bias and confirmation bias
- evaluate the reliability of memory using Loftus and Palmer (1974) and flashbulb memory research
- apply cognitive research to a new situation (Section B)

## 1 Key knowledge and worked examples

### Models of memory

- **Multi-store model** (Atkinson and Shiffrin, 1968): sensory memory → (attention) → short-term memory → (rehearsal) → long-term memory. H.M. supports separate short-term and long-term stores.
- **Working memory model** (Baddeley and Hitch, 1974): short-term memory has parts: phonological loop (sounds), visuospatial sketchpad (pictures), central executive (attention) and episodic buffer (added in 2000). Two tasks clash only if they use the same part.

**Schemas** are organized knowledge that help us understand quickly but change what we remember. Bartlett (1932): English students retold "The War of the Ghosts"; their versions got shorter and strange details became familiar (a canoe became a boat). This is **reconstructive memory** .



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### Thinking and decision-making

Kahneman: **System 1** is fast and automatic; **System 2** is slow and effortful. System 1 uses **heuristics** (short cuts), which can cause **cognitive biases**.

- **Anchoring bias** : a first number pulls later estimates towards it. Tversky and Kahneman (1974): after a wheel stopped at 10, people's typical estimate of African countries in the UN was 25 %; after 65, it was 45 %.
- **Confirmation bias** : looking for facts that support what we already believe.

### Is memory reliable?

Loftus and Palmer (1974): 45 students watched films of car crashes. "Smashed" gave a mean speed estimate of 40.8 mph; "contacted" gave 31.8 mph. A week later, 32 % of the "smashed" group reported broken glass (there was none), against 14 % of the "hit" group: a **leading question** can change the memory. Brown and Kulik (1977): shocking events give vivid **flashbulb memories**; Neisser and Harsch (1992): two and a half years after the Challenger disaster many accounts had changed, but people were still very sure. Emotion raises confidence more than accuracy.

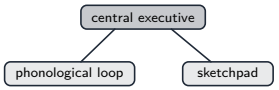
**Section B answer shape (6 marks):** name the theory → explain it → apply it to the people in the situation → support with a study → a limit.

## 2 Practice

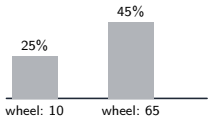
**2.1** Outline the **multi-store model** of memory. [3]



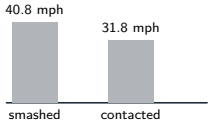

**2.2** Using the **working memory model**, explain why it is hard to repeat a list of words while counting aloud, but easy to repeat it while picturing a map. [2]



**2.3** *(Paper 1 Section A.)* Describe **one** study of anchoring bias. [4]




**2.4** *(Paper 1 Section B, learning and cognition.)* After a bicycle was stolen, a police officer asked a witness: "How fast was the thief running when he **smashed** into the girl?" Explain how this question could affect the witness's memory. [6]




## 3 Exam-style questions

**3.1** *(Paper 1 Section C.)* "Our memory of important events is accurate." Discuss this claim with reference to the concept of **measurement**. [15]








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