2.4 The Working Memory Model: Central Executive to Episodic Buffer: Test Pack

AQA 7182 · about 15 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer in full sentences for all extended and 6-mark or higher questions. Short 2-4 mark answers may be brief bullet points. Allow approximately 15 minutes for the whole pack.

1 Describe the central executive and give two of its features.

(Total for Question 1 is 3 marks)

2 Outline the phonological loop and name its two parts.

(Total for Question 2 is 3 marks)

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3 Outline the visual cache and inner scribe and explain their roles.

(Total for Question 3 is 3 marks)

4 Describe dual-task evidence supporting separate subsystems.

(Total for Question 4 is 4 marks)

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Mark scheme · 2.4 The Working Memory Model: Central Executive to Episodic Buffer: Test Pack

Question 1

identifies the central executive as an attentional controller that coordinates the other components of working memory oe	**M1**
states it has limited capacity oe	**B1**
states it is modality-free, able to process different types of information oe	**B1**

Answer: The central executive is an attentional controller that allocates processing to the sub-systems; it has a limited capacity and is modality-free, able to process visual and verbal information.

Question 2

states the phonological loop deals with verbal and acoustic information oe	**M1**
names the phonological store (inner ear) as one subcomponent oe	**B1**
names the articulatory process (inner voice) as the other subcomponent oe	**B1**

Answer: The phonological loop handles verbal and acoustic information and is split into the phonological store, which holds speech-based information briefly, and the articulatory process, which allows rehearsal.

Question 3

states the visual cache stores visual form and colour information oe	**M1**
states the inner scribe stores spatial relationships and records movements oe	**B1**
explains that the inner scribe also transfers information to the central executive for manipulation oe	**B1**

Answer: The visual cache stores visual form and colour information, while the inner scribe handles spatial relationships and movement information and can transfer spatial information to the central executive for manipulation.

Question 4

describes a dual-task finding, e.g. participants can carry out a visual task and a verbal task simultaneously with little interference oe	**M1**
refers to Baddeley et al. type studies showing tasks using different subsystems interfere less than tasks using the same subsystem oe	**M1**
explains this supports separate stores because if STM were a single unitary store, performing two tasks should cause equivalent interference oe	**A1**
provides an example, e.g. tracking a moving light while rehearsing words produces less interference than doing two verbal tasks simultaneously oe	**A1**

Answer: Dual-task studies show that participants can perform a visual tracking task and a verbal rehearsal task at the same time with relatively little interference, whereas two verbal tasks interfere strongly with each other. Baddeley and colleagues used such findings to argue for separate stores, because a unitary short-term memory would predict equal interference across tasks.

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