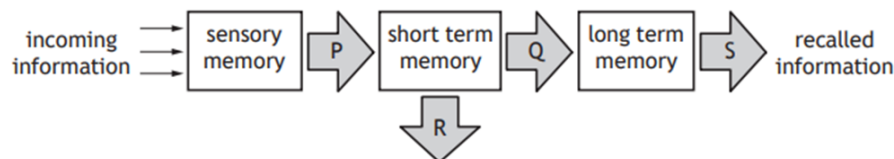


Memory

1. The diagram shows the processing of information within memory.



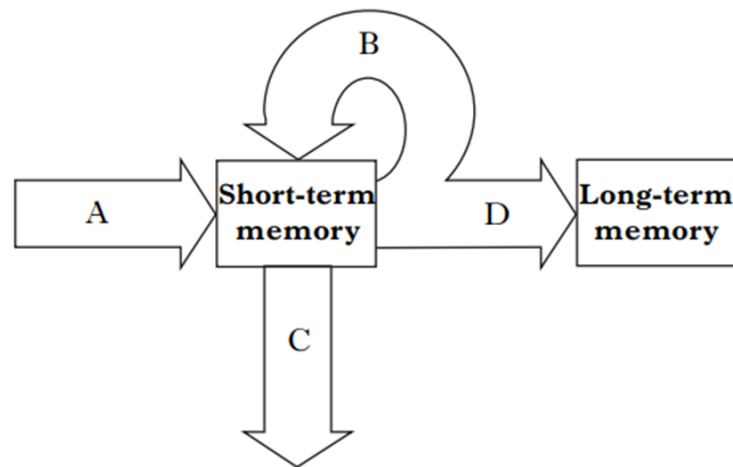
Which row in the table identifies the memory processes shown in the diagram?

	Memory process		
	Retrieval	Encoding	Displacement
A	S	Q	R
B	P	R	Q
C	S	P	Q
D	Q	P	R

2. The transformation of information into a form that memory can accept is called

A shaping
 B retrieval
 C encoding
 D storage.

3. The diagram below illustrates the relationship between short and long-term memory.



Which arrow represents the process of rehearsal?

4. The retrieval of information from long term memory is often aided by remembering the situation in which the information was encoded. This is described as using

A contextual cues
 B chunking techniques
 C rehearsal methods
 D memory span.

Memory

5 The following are methods used to aid memory:

1. Chunking
2. Elaboration
3. Organisation.

Which of these methods can be used to improve the transfer of information from short term to long term memory?

- A 1 only
- B 1 and 3 only
- C 2 and 3 only
- D 1, 2 and 3

6 Which of the following best describes memory span?

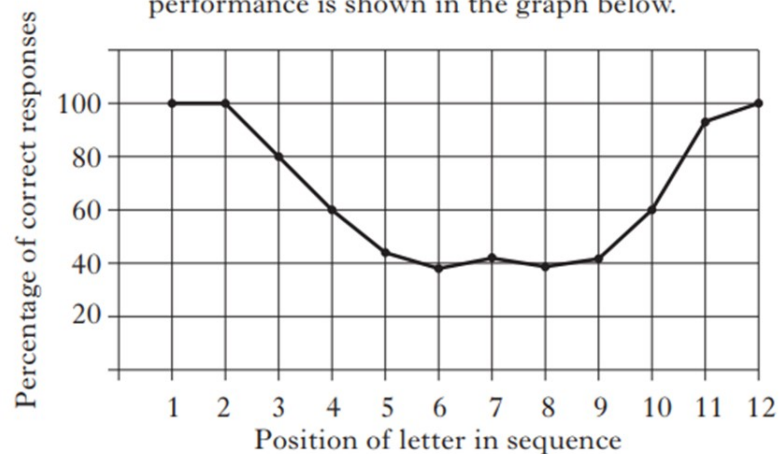
- A The total memory capacity of the brain
- B The time taken to learn a piece of information
- C The storage capacity of the short-term memory
- D The capacity to store information in long-term memory

7 Some individuals who suffer head injuries forget the events that happened a few seconds before the injury occurred.

This memory loss is most likely to be due to the injury affecting

- A retrieval
- B displacement
- C long-term memory
- D short-term memory.

8 Students were asked to recall twelve letters of the alphabet in any order, after hearing the list of letters read out slowly. An analysis of their performance is shown in the graph below.



8

On how many occasions was a letter recalled by more than 50% of the students?

- A 4
- B 5
- C 6
- D 7

Memory

9 A group of 18 people took part in an experiment on memory.

The table shows the number of people who could recall words from a list that had been read out to them.

Place of word in list	Number of people who could recall word
1st	18
2nd	18
3rd	18
4th	13
5th	12
6th	10
7th	12
8th	16
9th	17
10th	18

The change in the number of people who recalled the words in the middle of the list was due to

- A chunking
- B rehearsal
- C displacement
- D elaborative encoding.

Serial Position Effect

1

Rock music group		Control group	
Position of word in list	Number of students recalling word	Position of word in list	Number of students recalling word
1	19	1	20
2	18	2	19
3	15	3	17
4	9	4	12
5	5	5	7
6	3	6	6
7	3	7	6
8	12	8	14
9	17	9	19
10	19	10	20

- a) Explain why there is an increase in the number of students recalling the words towards the end of the list.

- (b) Any information which is not transferred into long-term memory is displaced. Explain why displacement occurs.

- (c) The student is storing a record of facts as she learns this information. State the part of the brain in which such memories are stored.

2

Group	Meaning of words shown	Correct responses immediately after reading the words (%)	Correct responses after reading the book for one hour (%)
1	related	96	54
2	unrelated	96	78

- a) What aspect of memory explains the high percentage of correct responses immediately after reading the words?

- b) Suggest why the groups were asked to read a book during the investigation.

- c) State **two** conclusions that can be drawn from the results of this investigation.

1

2

1

1

1

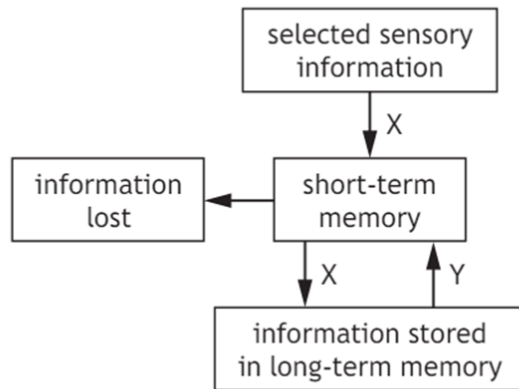
1

1

2

Memory

3 The diagram represents the flow of information through memory.



(i) Name process X.

(ii) Explain why information can be lost by displacement from short-term memory.

(iii) Rehearsal increases the chance of information being transferred from short-term to long-term memory.

Describe **one** other way that information can be transferred from short-term to long-term memory.

(iv) Y represents the retrieval of information from long-term memory.

Describe how contextual cues aid the retrieval of information.

1

4 Describe **three** methods that help transfer information from short-term to long-term memory during learning.

3

1

Serial Position Effect

5 An investigation was carried out to determine the effects of a distraction task on the ability to recall words in a list.

A group of 20 students listened to a list of words being read aloud.

Immediately after the last word had been read out, the students were distracted by being asked to recite the alphabet backwards from Z to A.

They were then asked to write down all the words from the list that they could remember.

The results of this investigation are shown in the table below.

<i>Position of word in list</i>	<i>Number of students remembering word</i>	<i>Position of word in list</i>	<i>Number of students remembering word</i>
1	20	11	2
2	19	12	3
3	18	13	4
4	17	14	2
5	15	15	3
6	10	16	4
7	8	17	3
8	6	18	3
9	4	19	2
10	3	20	3

a) Explain the effect of the distraction task on memory in this investigation.

b) A control group of students should have been used in this investigation.

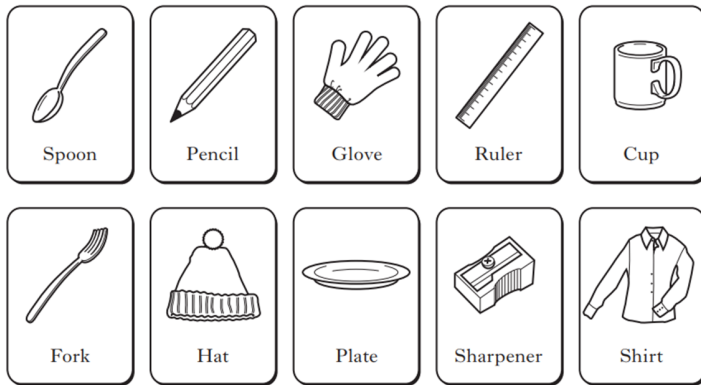
(i) Describe how the procedure used with the control group should differ from the procedure outlined.

(ii) Suggest how the expected pattern of results from the control group would differ from the results shown in the table.

Memory

6

Three groups of children were shown cards of the following objects.



- (a) Each group of children was given a different method to use in order to memorise the objects. The methods used by each group are shown below.

Group 1 — making up a story to include the objects

Group 2 — sorting the objects into related categories

Group 3 — saying the names of the objects to themselves several times

- (i) State the term that describes the method used by each group to transfer the objects into long-term memory.

Group 1 _____

Group 2 _____

Group 3 _____

- (ii) Several days later, the children were asked to recall the list of objects. Suggest an appropriate contextual cue that the children could use.

Explain how this cue would aid their recall.

Contextual cue _____

Explanation _____

7

A biology teacher was teaching a lesson about the heart.

- (i) Name the level of memory involved when students first saw and heard information on the heart.

1

- (ii) As part of the lesson, students coloured in and labelled a diagram of the heart.

Suggest how a diagram of the heart in an exam might provide a contextual cue to this activity.

1

- (b) Any information which is not transferred into long-term memory is displaced. Explain why displacement occurs.

1

- (c) The student is storing a record of facts as she learns this information. State the part of the brain in which such memories are stored.

1

Memory

- 8 In producing this diagram the student used various methods to learn the information.

Other than rehearsal, name **two** methods that she used and describe how they helped her transfer the information into her long-term memory.

2

1 Method _____

Description _____

2 Method _____

Description _____

Memory Answers

- | | |
|--|--|
| <p>1. A</p> <p>2. C</p> <p>3. B</p> <p>4. A</p> <p>5. C</p> <p>6. C</p> <p>7. D</p> <p>8. D</p> <p>9. C</p>
<p>1a) information encoded into LTM</p> <p style="padding-left: 20px;">b) STM has a limited capacity</p> <p style="padding-left: 20px;">c) cerebral cortex</p> <p>2a) STM which has a limited capacity</p> <p style="padding-left: 20px;">b) distraction task to prevent rehearsal/displace information from STM</p> <p>C) meaning of words has no effect on their recall</p> <p style="padding-left: 20px;">related words are harder to recall</p>
<p>3. (I) encode (ii) STM has limited capacity</p> <p style="padding-left: 20px;">(iii) elaboration: providing meaning/detail to information</p> <p style="padding-left: 40px;">Organisation—putting information into related groups</p> <p style="padding-left: 20px;">(iv) trigger memories related to time/place when memory was encoded into LTM</p> | <p>4. Elaboration: providing meaning/detail to information</p> <p style="padding-left: 20px;">Organisation—putting information into related groups</p> <p style="padding-left: 20px;">Rehearsal— repeat the information</p>
<p>5a) prevents rehearsal OR displaces information from STM</p> <p>b) (i) exact same setup but no distraction task</p> <p style="padding-left: 20px;">(ii) words at end show higher percentage of recall</p>
<p>6a) (i) 1 -elaboration 2-organisation 3– rehearsal</p> <p style="padding-left: 20px;">(ii) scent/clothes/seat/time/people</p> <p style="padding-left: 20px;">Trigger memories related to when memory was encoded into LTM.</p>
<p>7. (i) sensory</p> <p style="padding-left: 20px;">(ii) The exam diagram may remind them of the time when they coloured in/labelled the heart diagram in class</p> <p>b) Limited capacity</p> <p>c) cortex</p>
<p>8. elaboration: providing meaning/detail to information</p> <p style="padding-left: 20px;">Organisation—putting information into related groups</p> |
|--|--|