A. Keywords:

Processing – the operations we perform on sensory information in the brain

Input – sensory information we receive from our environment

Storage – the retention of information in our memory system

Encoding – turning sensory information into a form that can be stored in the brain

Acoustic encoding – the process of storing sound in our memory

Visual encoding – the process of storing something that is seen in our memory system

Semantic encoding – the process of storing the meaning (definitions) of information in our memory system

Output – information we recall and our behavioural responses

Retrieval – the recall of stored memories

Short-term memory – our initial memory store that is temporary and limited

Long-term memory – a memory store that holds potentially limitless amounts of information for up to a lifetime

Duration – the length of time information can be stored in STM and LTM

Capacity – the amount of information that can be stored in STM and LTM

Rehearse – when we repeat information over and over to make it stick

Displacement – when STM becomes full and new information pushes out old

Schema – a packet of knowledge about an event, person or place

B. Memory and information processing

The brain processes the information we receive from our sense. It pays attention to it and makes decisions based upon it. We unconsciously or deliberately store some sensory information. This requires encoding the sensory information. Once this is done, the memory system can store the memory trace for a few seconds or up to a lifetime. STM lasts around 18 seconds and holds about 7 pieces of information. LTM can last for minutes or up to an entire lifetime.

C Multi store model of memory

Atkinson and Shiffrin identified 3 distinctive different stores in our memory system. The sensory register receives all the sensory information and if we pay attention to it information can be transferred to our STM where information can stay for 15-30 seconds. If we rehearse it we can retain it in our STM for much longer. LTM can hold information indefinitely and potentially has a limitless capacity.

D. Expert Modelling:

Parul struggles to remember things due to a recent accident. Explain how Parul could try and remember new events. You should refer to the multi-store model in your answer. (2)

Multi-store model suggests rehearsal is needed to transfer information to long-term memory (1) so Parul could verbally repeat information about new events over and over again to try and remember them (1).

E. Understanding amnesia

Sometimes people experience a special type of forgetting called amnesia. This can often be after a trauma to the brain. Anterograde amnesia is the inability to store new long-term memories after a brain injury. Retrograde amnesia is where information before the brain injury cannot be recalled. HM is famous case of both types of amnesia as his brain was damaged during surgery. Since HM's death his brain has been used to develop research on memory and amnesia.

F Bartlett's theory of reconstructive memory

Memories aren't an exact replication of what happened, they are an active reconstruction where we use our schemas (packets of knowledge about an event, person or place) to fill in gaps in recall. Schemas influence our memory in the following ways: cause omissions where we leave out unfamiliar or unpleasant details; transformations – details are changed to make them familiar or rational; familiarisation where we change details to align to our schema & rationalisation we add details into our recall to give a reason for something.

G. Wider thinking / further reading:

https://learndojo.org/gcse-revision/aqa-psychology/memory/