The Multi-store model of memory	1	Name the first storage system in the MSM, its 5 coding stores and associated senses	
	2	What is the **capacity** and **duration** of the first strore of the MSM?	
	3	Researcher + findings that support **capacity** in this store.	
	4	Name the second store in the MSM and how information passes through it.	
	5	What is the **coding capacity** and **duration** of the second score	
	6	Researcher + findings that support **coding** in this store.	
	7	Researcher + findings that support **capacity** in this store.	
	8	Researcher + findings that support **duration** in this store.	
	9	Name the third storage system in the MSM and how is information in it used?	
	10	What is the **coding capacity** and **duration** of the third score	
	11	Researcher + findings that support **coding** in this store.	
	12	Researcher + findings that support **capacity** in this store.	
	13	Researcher + findings that support **duration** in this store.	
	14	Why is MSM's view of memory as three distinct stores limited?	
	15	What is the **duration** of the first store supported by?	
Types of long-term memory	16	State the three types of **LTM**	
	17	Define one (E) and its type	
	18	Define one (S) and its type	
	19	Define one (P) and its type	
	20	Give three features of (E)	
	21	Give three features of (S)	
	22	Give three features of (P)	
	23	Researcher + findings of differences between men and women in LTM tasks	
	24	Researcher + which types does the case study of CL show a separation between and how.	
	25	Researcher + which types does the case study of PM show a separation between and how.	
	26	Case study that shows divisions between all three types. & Illnesses case study has.	
	27	Which types of **LTM** has the above case study have access to and not have access to + examples	
	28	Which types of **LTM** can the above case study make and not make	
	29	Why may studies on types of **LTM** like the one above be criticised?	
	30	How may the findings of the above research be investigated further?	
The working memory model	31	Who created the WMM, what did they develop and why?	
	32	What is the CE? Definition	
	33	Researcher + findings demonstrating capacity of CE	
	34	What is the PL? Definition and sections	
	35	What are the sections of the PL?	
	36	Researcher + findings demonstrating capacity of PL	
	37	What is the VSS? Definition and sections.	
	38	What are the sections of the VSS?	
	39	Researcher + findings demonstrating separation of components of VSS	
	40	What is the EB? Definition	
	41	Researcher + findings demonstrating existence of EB	
	42	Case studies names + how did they show distinction between PL and VSS	
	43	Why has the CE been criticised by psychologists?	
	44	What impact could knowledge of the WMM have on peoples lives?	
	45	What is good and bad about WMM studies being lab based	

Section	#	Question	Answer
Explanations for forgetting	46	Define **interference theory**	
	47	Name one type of **interference** and define it	
	48	Name the other type of **interference** and define it	
	49	When is **interference** more likely to occur?	
	50	Why is this?	
	51	When is interference less likely to occur?	
	52	Researcher + How investigated interference	
	53	What did the study above find and what does this mean?	
	54	Define **retrieval failure**	
	55	What is the problem when memory is inhibited by being in a different location?	
	56	Give supporting researcher and brief findings of theory above.	
	57	What is the problem when memory is inhibited by being in a different mood/ bodily condition?	
	58	Give supporting researcher and brief findings of theory above.	
	59	What is the problem when memory is inhibited by how memories are arranged /associated with other memories?	
	60	Give supporting researcher and brief findings of theory above.	
Eyewitness testimony	61	Give three reasons/factors why eyewitness testimony often seen as inaccurate.	
	62	What is the term that means Memory is not an accurate recording of events.	
	63	LQ 1) memory being recalled differently due to an actual change to memory 2) due to an emotional pressure	
	64	What are memories often altered to fit?	
	65	Researcher + give two verbs were used when participants were asked how fast cars were moving and speeds guessed.	
	66	Researcher + Findings of follow up to above study	
	67	What is the mental state of arousal that includes feelings of extreme concern and tension, how may it increase recall?	
	68	Give an example as to why accuracy of eye witness testimony may be reduced by the above mental state and explain	
	69	What is the law called relating to recall accuracy and levels of the above mental state?	
	70	Briefly describe the above law	
	71	Why may lab based research into EWT lack external validity?	
	72	Researcher + Results of study that studied EWT and above mental state in lab setting.	
	73	How is the above research supported in a more natural environment?	
	74	What is PEC, what does it result in and why does it happen?	
	75	Who investigated PEC and what was found?	
Improving eyewitness testimony	76	Describe the **standard interview**.	
	77	What was the technique suggested that police use in 1985, who suggested it and what was it supposed to do?	
	78	What is CR in this model and describe the feature.	
	79	What is RE in this model and describe the feature.	
	80	What is CO in this model and describe the feature.	
	81	What is CP in this model and describe the feature.	
	82	What was the 1987 development of this technique called? And what did it focus on?	
	83	Give 4 features of this newer model.	
	84	Researcher + how (procedure) was CI studied.	
	85	What where the findings of the above study? + Suggests	
	86	Researcher + findings of comparison of CI, ECI and MCI to control groups.	
	87	Type of research above, number of studies included and + of methodology.	
	88	What practical problem does the CI have and why is this an issue?	
	89	When is the CI not effective?	
	90	For who has the CI been developed into the MCI and what does MCI stand for	

The Multi-store model of memory	1	Name the first storage system in the MSM, its 5 coding stores and associated senses	**Sensory register**, Iconic = Vision, Echoic = Sound, Haptic = Touch, Gustatory = Taste, Olfactory = Smell
	2	What is the **capacity** and **duration** of the first strore of the MSM?	**Capacity,** very large, contains all sense impressions each moment. Duration, very short low as 250ms each store has different duration.
	3	Researcher + findings that support **capacity** in this store	**Spearling (1960)** Participants could recall a random row of letters flashed up in grid of 20 letters suggesting all retained.
	4	Name the second store in the MSM and how information passes through it.	**Short Term Memory**. Receives information from SR by attention. Passes to LTM via rehearsal.
	5	What is the **coding capacity** and **duration** of the second score	**Coding**: Acoustic. **Capacity**: 7 items +/- 2, improved by **chunking**. **Duration** 18-30 seconds.
	6	Researcher + findings that support **coding** in this store.	**Baddeley (1966)** found immediate recall was worst for list of words that were **acoustically similar**, suggesting confusion as coded acoustically
	7	Researcher + findings that support **capacity** in this store.	**Jacobs (1887) Capacity** for recalling lists of letters was around 7 items and 9 for numbers
	8	Researcher + findings that support **duration** in this store.	**Peterson and Peterson ()** recall for 3 letter trigrams was less than 10% after 18 seconds.
	9	Name the third storage system in the MSM and how is information in it used?	**Long term memory**. Passed back to **STM** by **retrieval**
	10	What is the **coding capacity** and **duration** of the third score	**Coding**: Semantically. **Capacity**: No limit, but can lose access. **Duration** unlimited.
	11	Researcher + findings that support **coding** in this store.	**Baddeley (1966)** found recall after 20 mins was worst for list of words that were **semantically similar**, suggesting confusion as coded semantically
	12	Researcher + findings that support **capacity** in this store.	**Wagnaar (1986)** recall of over 2400 events was 75% after 1 year and 45% after 5 years
	13	Researcher + findings that support **duration** in this store.	**Bahrick (1975)** recall of names to old photographs was 90% after 15 years and 80% after 48 years
	14	Why is MSM's view of memory as three distinct stores limited?	There are 3 separate types of long term memory not just one unit, and the WMM provides a more dynamic explanation of STM
	15	What is the **duration** of the first store supported by?	**Evolutionary theory**, quick reactions are important. Too much information would slow reactions.
Types of long-term memory	16	State the three types of **LTM**	**Episodic, Sematic** and **Procedural**
	17	Define one (E) and its type	**Declarative** (can be expressed in words) - memory of experiences and specific events
	18	Define one (S) and its type	**Declarative** (can be expressed in words) - facts, meanings, concepts and knowledge about the external world
	19	Define one (P) and its type	**Non-declarative** (cant put into words) - unconscious memory of skills and how to do things
	20	Give three features of (E)	**Time stamped** (stored with reference to time and place). Conscious recall. Auto-biographical. Emotions when coded affect strength of recall. Coded in **Prefrontal Cortex**, stored across brain.
	21	Give three features of (S)	Memories stronger if processed more deeply. Conscious recall. Last longer than episodic. Epsiodic become semantic over time, Number of brain areas associated ie **Perirhinal Cortex**
	22	Give three features of (P)	Unconscious, often Learnt in childhood, More resistant to forgetting, Automatic language links to semantic. Often stored in **Motor Cortex/ Cerebellum**.
	23	Researcher + findings of differences between men and women in LTM tasks	**Herliz (1997)** 1000 M & F. tasks either **episodic** or **sematic.** Women better on episodic than semantic, no difference in semantic. Suggesting different systems.
	24	Researcher + which types does the case study of CL show a separation between and how.	**Vicari (2007)** Brain damage after CL's tumour removal. Deficiencies in **episodic** memory, but not **semantic**.
	25	Researcher + which types does the case study of PM show a separation between and how.	**Finke (2012)** Ability to learn new pieces for Cello unaffected despite amnesia. Shows procedural LTM separate to episodic and semantic.
	26	Case study that shows divisions between all three types. & Illnesses case study has.	**Clive Wearing**. **Retrograde** (cant remember past) and **Anterograde** (cant make new memories) amnesia.
	27	Which types of **LTM** has the above case study have access to and not have access to + examples	Has: **Semantic**, remembers facts about his life. **Procedural**, can play the piano. Does not have: **Episodic**, Cant remember musical education.
	28	Which types of **LTM** can the above case study make and not make	Cant make new **semantic** or **episodic**, but can under experimental conditions make new **procedural** memories via repetition
	29	Why may studies on types of **LTM** like the one above be criticised?	**Ideographic** /case study research lacks controls needed to establish cause and effect relationships. CW could be different to normal population in other ways.
	30	How may the findings of the above research be investigated further?	**Cognitive neuroscience** scanning techniques (Ie FMRI) provide scientific credibility to associating brain areas with types of memory. **Nomothetic** methods increase generalisability
The working memory model	31	Who created the WMM, what did they develop and why?	**Baddely and Hitch (1974) STM**, Thought **STM** in **MSM** was too limited. must be an active processor, holding multiple items of information while being worked on
	32	What is the CE? Definition	Central Executive, head of model. Passes sensory information on to PL and Vss
	33	Researcher + findings demonstrating capacity of CE	**Baddeley (1998)** participants had difficulty switching between thinking up random numbers and typing on a keyboard. Suggesting **dual task performance** is low, CE limited capacity.
	34	What is the PL? Definition and sections	Phonological Loop—sound information,
	35	What are the sections of the PL?	Primary Acoustic Store (inner ear) & Articulatory Process (inner voice)
	36	Researcher + findings demonstrating capacity of PL	**Baddeley (1975)** found increased recall for 5 word lists with short words, suggesting **capacity** of around 2 seconds
	37	What is the VSS? Definition and sections.	Visuo-spatial Sketchpad—visual / spatial information, Visual Cashe (form and colour) & 'Inner Scribe (relationships between objects)
	38	What are the sections of the VSS?	Visual Cashe (form and colour) & 'Inner Scribe (relationships between objects)
	39	Researcher + findings demonstrating separation of components of VSS	Found when given an **interference task** (task that uses same processing) visual memory for Chinese characters decreased and spatial memory for location of dots on a screen decreased.
	40	What is the EB? Definition	Episodic buffer general store for model, added in 2000.holds and combines information from other stores.
	41	Researcher + findings demonstrating existence of EB	Prabhakaran (2000) FMRI shows activation in prefrontal cortex when visal and audio information combined. Biological evidence for EB
	42	Case studies names + how did they show distinction between PL and VSS	SC & KF both had brain damage, both had issues with the functioning gof their PL however VSS not s affected, suggesting septate systems,
	43	Why has the CE been criticised by psychologists?	Vague concept, no full explanation of function and diffiuclt to test. (not operationalised)
	44	What impact could knowledge of the WMM have on peoples lives?	Provides explanations of disorders such as reading deficits, could lead to effective therapies.
	45	What is good and bad about WMM studies being lab based	Positive is high control of external vaiables = high internal validity, Negitive is not how memory is used in real situations = low external validity.

Explanations for forgetting	46	Define **interference theory**	Forgetting is due to LTM becoming confused or disrupted by other information during **coding**
	47	Name one type of **interference** and define it	**Pro-active interference**, forward in time, information already stored interferes with recalling new information.
	48	Name the other type of **interference** and define it	**Retro-active interference**, backwards in time, when coding something new disrupts previous information.
	49	When is **interference** more likely to occur?	When two items are similar
	50	Why is this?	**Response completion**
	51	When is interference less likely to occur?	**Time sensitivity -** When there is a time gap between when you learn both sets of information
	52	Researcher + How investigated interference	**Schmidt (2000)** Participants (211) asked to recall street names around childhood homes.
	53	What did the study above find and what does this mean?	More times moved, fewer streets recalled. Shows **Retro-active interference** learning new streets makes recalling old streets harder
	54	Define **retrieval failure**	Info is in LTM but forgetting happens due to the absence of **cues (Cue dependent forgetting)**
	55	What is the problem when memory is inhibited by being in a different location?	Lack of **context dependant cues**
	56	Give supporting researcher and brief findings of theory above.	**Godden and Baddeley)1975)** Found divers recalled better in location information learnt (dry land or underwater)
	57	What is the problem when memory is inhibited by being in a different mood/ bodily condition?	Lack of **state dependant cues**
	58	Give supporting researcher and brief findings of theory above.	**Overton (1972)** found recall was better when in same internal state (drunk or sober)
	59	What is the problem when memory is inhibited by how memories are arranged /associated with other memories?	Lack of **category / organisational cues**
	60	Give supporting researcher and brief findings of theory above.	**Tulving and Pealstone (1996)** found a free-recall group performed worse than group given list split into categories.
Eyewitness testimony	61	Give three reasons/factors why eyewitness testimony often seen as inaccurate.	**Anxiety, Leading questions, Post event contamination.**
	62	What is the term that means Memory is not an accurate recording of events.	**Reconstructive memory,** It is remade in recalling and may produce errors **(confabulations)**
	63	LQ 1) memory being recalled differently due to an actual change to memory 2) due to an emotional pressure	**Substitution bais** and **Response bias**
	64	What are memories often altered to fit?	**Schema,** pre-existing, cognitive short-cuts/biases
	65	Researcher + give two verbs were used when participants were asked how fast cars were moving and speeds guessed.	**Loftus and Palmer (1974)** contacted 31.8 MPH and smashed 40.8 MPH .
	66	Researcher + Findings of follow up to above study	**Loftus and Palmer (1974)** participants twice as likely to report yes to questionnaire 1 week later if verb "smashed" was used rather than "hit"
	67	What is the mental state of arousal that includes feelings of extreme concern and tension, how may it increase recall?	**Anxiety**, increases alertness and emotions felt improve LTM encoding
	68	Give an example as to why accuracy of eye witness testimony may be reduced by the above mental state and explain	Weapon, **Weapon effect**/focus. Cause extreme high **anxiety** distracting the witness.
	69	What is the law called relating to recall accuracy and levels of the above mental state?	**Yerks-Dodson Law of Arousal**
	70	Briefly describe the above law	Low stress/**anxiety** = poor recall due to low attention. Medium **anxiety** = high recall due to attention, High **anxiety** = low recall due to too much stress.
	71	Why may lab based research into EWT lack external validity?	EWT in real life often includes high levels of **anxiety** that is often not present in lab studies.
	72	Researcher + Results of study that studied EWT and above mental state in lab setting.	**Yuille and Cutshall (1986)** 49% of participants could identify man holding pen, 33% could identify man holding pen.
	73	How is the above research supported in a more natural environment?	**Peters 1988** Participants better able to recognise researcher than nurse who gave injection (needle = weapon)
	74	What is PEC, what does it result in and why does it happen?	Recall of events by one witness alters memory of others. **Memory conformity**, Wanting social approval
	75	Who investigated PEC and what was found?	**Gabbert (2003)** 71% o f pairs allowed to discuss videos of crimes included details not included in their version of film. 0% control group.
Improving eyewitness testimony	76	Describe the **standard interview**.	Quick, direct and closed questions in short time. Order of questions didn't match mental representation, witnesses couldn't talk freely, interrupted.
	77	What was the technique suggested that police use in 1985, who suggested it and what was it supposed to do?	The **cognitive interview**, **Fisher and Geiselman (1985)** mprove the accuracy of EWT
	78	What is CR in this model and describe the feature.	**Context reinstatement** - Mentally returning to the scene of the crime, thinking of psychical environment and emotions. (based on ideas of **retrieval failure /CDF**)
	79	What is RE in this model and describe the feature.	**Report Everything** - Interviewer encourages reporting of every detail of event, even irrelevant (may trigger other memories)
	80	What is CO in this model and describe the feature.	**Changing Order** - interviewer tries alternate ways to recall timeline, ie middle to start (reduces influence of **schema**)
	81	What is CP in this model and describe the feature.	**Changing Perspective** - Recalls from perspective of other witnesses (reduce influence of schema)
	82	What was the 1987 development of this technique called? And what did it focus on?	**Enhanced Cognitive Interview**, Building trust in interviewer.
	83	Give 4 features of this newer model.	Interviewer not distracting, witness controlling flow of info, open ended questions, witness speaking slowly, Reminded not to guess and use "don't know". Offering clarifying statements, reducing anxiety+relaxatio
	84	Researcher + how (procedure) was CI studied.	**Fisher (1987)** 16 detectives in match pairs design. (ranked previous interviewing performance), one group got CI training one without. Amount of information gained in subsequent interviews recorded.
	85	What where the findings of the above study? + Suggests	CI trained group gained 63% more information than non CI group. Cognitive interview is effective in real life application
	86	Researcher + findings of comparison of CI, ECI and MCI to control groups.	**Memon (2010)** found CI lead to more accurate recall than non CI interviews, especially in older people
	87	Type of research above, number of studies included and + of methodology.	**Meta-analysis** of 57 studies, stronger confidence in findings due to combined statistical power of multiple studies. Ie overall effect/ trend clear even if some studies are out.
	88	What practical problem does the CI have and why is this an issue?	It is time consuming when officers could be doing other work, or the investigation may be time sensitive.
	89	When is the CI not effective?	Identifying people from identity parades and photographs.
	90	For who has the CI been developed into the MCI and what does MCI stand for	**Modified cognitive interview,** for children and people with learning difficulties.