1. Waugh & Norman (1965) performed an experiment in which they varied the rate of presentation of items in a probe-digit task. The presentation rate was either 1 digit per second or 4 digits per second. The data from the subjects is summarized in the graph below.

![Graph showing relative accuracy versus number of interfering items](image)

a. Describe the "Probe-Digit Task" used by Waugh & Norman.

7 6 4 13 2 9 4

b. Describe the theoretical interpretation that Waugh & Norman provide to describe the results they obtained when using their probe-digit task. What was the major theoretical alternative? What was the logic of their interpretation?

*Interference (rather than decay)*

*Time was less important than # of interfering items*

2. Consider Craik and Lockhart's LEVELS OF (Depth of) PROCESSING account?
   (a) Describe the proposal

*Deeper = Better Memory*

(b) NAME and DEFINE two problems with this Craik & Lockhart account.

i. **Task Effects** (Study-Test Match; Chasen and/or how good memory is)

ii. **Circularity of Definition** (Encoding Specificity; Transfer Appropriate Processing)
3. Consider the "Sternberg Memory search" task:
   (a) DESCRIBE the "Sternberg memory search task"

   Memory set into memory
   Probe provided
   Is probe part of set?

   (b) Draw a **figure (picture)** illustrating the results of the data produced by the "Sternberg memory search task". Label the X and Y axes with appropriate meaningful labels.

   ![Figure](image)

   (c) What are the theoretical conclusions one should draw from the observed results from when participants perform the Sternberg memory search task?

4. DRAW a "typical" serial position curve. LABEL the axes. LABEL the important features.

   ![Typical Serial Position Curve](image)

5. DEFINE each of:
   (i) The dual-coding hypothesis (dual-coding theory)
   
   **V**isual and **V**erbal both impo**r**tant! **S**tored = **C**ued! For **R**ecall.

   (ii) Serial self-terminating search
   
   Hard visual search and when find.

   (iii) Encoding Specificity
   
   Things encoded include other elements coded at same time. **O**peration done on info helps determine what is stored.

   (iv) The "binding problem"
   
   Things together. Processing of same item across different brain regions helps determine what is stored.
6. Answer each MULTIPLE CHOICE question:

What deficit is associated with (bilateral) damage to the hippocampus?

A. Aphasia
B. Agnosia
C. Anterograde Amnesia
D. Proactive Interference

When new learning interferes with your ability to perform some action that you used to be able to do, this is referred to as:

A. Retrograde Interference
B. Anterograde Interference
C. Retroactive Interference
D. Proactive Interference

What has been proposed to be the most important aspect of Geiselman's Cognitive Interview?

A. warning interviewees against bias
B. recall all
C. reinstate context
D. recall in a variety of orders

7. Provide an example of "Release from PI"
   - include a description, a definition, and an illustration

   **Example:**
   
   Change in topic \(\Rightarrow\) Better recall for next list of items.

   **Recall**

   Flowers, Flowers, Flower, Flowers.
8. This graph shows the Johnston & Heinz result.

![Graph showing cost vs. number of messages]

Note: X-axis is cost (ms); y-axis number of messages; top line "meaning difference only"; middle line "physically different only"; bottom line "both meaning and physical differences".

a. What was the **methodology** used by Johnston & Heinz (what was the experiment like? What were the conditions? What did the subjects do?)

   RT to light; simultaneously listen to 1, 2, 3 phrases spoken — listen for correct...

b. What are the **theoretical implications** of the Johnston & Heinz results?

   Multimodal Model of Attn = Early Seln > Spatial Than Late Seln.

9. In Baddley's model of Working Memory what are the components and their primary functions?

   ![Diagram of Working Memory components]

   - **Central Executive**
   - **Control**
   - **Phonological Loop**
     - Auditory
     - Language
   - **Visual-Spatial Sketchpad**
   - **Episodic Buffer**
     - Personal Memory
10. SHORT ANSWER:

(b) When participants in a "list memorization test" (free recall) is delayed by another intervening task, what is the most likely result (other than a generally lower total number of items recalled)?

Recency Effect Decreases.

(c) What can we learn for a T-O-T state? (i.e., what does TOT stand for and what does its existence tell us?)

More Memory Are There than Explicitly Available.

11. FINISH this list of at least TEN different "TYPES" of memory that have been discussed or mentioned in class.

A. SENSORY (e.g., Echoic, Iconic, Haptic, ...)
B. SHORT TERM
C. LONG-TERM
D. DECLARATIVE
E. NONDECLARATIVE
F. Working Semantic
G. Procedural
H. Explicit
I. Implicit
J. Unconscious

12. Describe GEORGE SPERLING'S work on ICONIC MEMORY. Describe the methodology, draw the results, and describe the conclusions.

Flash grid:

[Diagram of grid with letters X, J, D, P, T, S, M, V, E, I, A, Y]

 Cue Tones
 High
 Mod
 Low

70% Recall

Iconic Memory
250 ms duration

Whole or Partial Report.
13. (i) If someone were to be intoxicated (BAC .08) during encoding, and then their scores were tested when (1) sober or (2) equivalently intoxicated (BAC .08). Which condition would produce better recall for a list of items?

3. **Study - Test Match.** (Alc-Alc)

(ii) If someone were to be sober during encoding, and their scores were tested when (1) sober or (2) when intoxicated (BAC .08); which condition would produce better recall for the list of items?

1. **Study - Test Match**

a. draw a graph of your expected findings. Label the graph appropriately.

b. What is the term for this pattern of results?

14. Discuss two alternative explanations for Childhood Amnesia

1. **Failure at Encoding**
   - No "self" yet

2. **Failure at Retrieval**
   - Def system

3. **Interference**
   - Loss of new info

15. Describe one piece of evidence for each of:
   a) Early Selection
      - Shading little into sep. channel
   b) Late Selection
      - Cocktail Party Effect
   c) State-dependent learning
      - Sub # 13

16. DEFINE
   a) Self-reference effect
      \[ \text{memory (mnemonic w/ self-ref))} \]
   b) Von Restorff effect
      \[ \text{memory distinctive} \]
   c) Subjective organization
      \[ \text{personal org. of info du} \text{" recall} \]
   d) Brown-Peterson Task
      \[ \text{w x s} \]
      \[ \text{273, ..., 26, 26} \text{ (x time) } \]
      \[ \text{target was} \]
      \[ \text{fancy} \text{" loss of STM from Decay?} \]