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## Summer 2008: COGNITION (Van Selst) 29 +3 points (graded out of 29, 3 point bonus) MIDTERM NUMBER 1 (chapters 1-4) 24% of final grade ANSWER DIRECTLY ON THE TEST

- 1. Which historic figure is most associated with Functionalism?
  - a. Descartes
  - b. James
  - c. Wundt
  - d. Ebbinghaus
- 2. Define **EITHER** the term "*stages of processing*" **or** "*modular processing*"... expand on at least one example that clearly indicates your understanding of the term and how the concept has been used to further our understanding of cognitive operations

3. What psychological perspective is the phrase "the whole is often not predictable from the sum of the parts" associated with?

4. Describe one empirical finding discussed in the text related to the concept of "blindsight"

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## 5. Draw a picture of the Brain.

a. Label the four lobes of the neocortex and the lobe underlying them

b. For each of three of the five lobes indicate at least one (cognitive) function specifically associated with that lobe.c. Draw the cerebellum, indicate at least one function associated with it.

6. Atkinson & Shiffrin's Symbolic Model has become known as the "standard model". Illustrate their model.

- 7. Identify, then provide a brief synopsis, of at least three different behavioral measures and three different neurological approaches that can be used to indicate cognitive function.
  - i. (behavioral) =
  - ii. (behavioral) =
  - iii. (behavioral) =
  - iv. (neurological) =
  - v. (neurological) =
  - vi. (neurological) =
  - 8. Define the core philosophy of each approach:
    - a. STRUCTURALISM:
    - b. FUNCTIONALISM:
    - c. RATIONALISM:
    - d. BEHAVIORISM:
    - e. GESTALT:
- 9. What is the problem generated by Wundt's reliance on introspection?
  - a. Inherent failures of reductionism
  - b. Subjective bias
  - c. Slavish empiricism
  - d. Epiphenomenalism

10. Indicate the difference between an apperceptive and associative agnosia? Define each.

Apperceptive:

Associative:

Difference:

- 11. Define **each** of the following three terms
  - i. Word Superiority Effect
  - ii. Categorical perception
  - iii. Phonemic similarity effect
- 12. How do Automatic and Controlled processes differ? Indicate four dimensions that they differ on and how they differ.

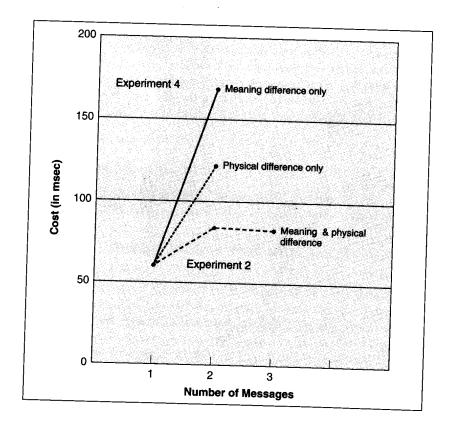
AUTOMATIC	CONTROLLED

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- 13. List the three fundamental assumptions of cognitive psychology (as discussed in class). Indicate why each is important.
  - (1)
  - (2)
  - (3)
- 14. Describe one finding discussed in the text and/or in lecture concerning "subliminal perception" (or "perception without awareness"). < "eat popcorn" does not count>

15. An error in choosing an objective or specifying the means to achieve the objective

- a. Slip
- b. Mistake
- c. Perseveration error
- d. Data-Driven error
- 16. Describe "FEATURE INTEGRATION THEORY"



This graph shows the Johnston & Heinz result.

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".

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

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

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19. What is the "binding problem" ?

- 20. What were two of the factors / events / happenings that lead to the cognitive revolution?
  - i.

ii.

21. Identify four functions of attention (per Kellog and/or Van Selst)

i. ii. iii. iv.

22. Define each:

PERCEPTION

SENSATION

COGNITION

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23. List three different types of slips that people make (as defined in lecture). Provide an example of each.

i.

ii.

iii.

- 24. List three of the gestalt principles of perceptual organization then define or illustrate each.
  - i.

ii.

iii.

25. Describe STERNBERG'S SEARCH TASK and the theoretical conclusion drawn from his findings

- 26. This brain structure is highly associated with the coordination of fine motor movements and balance.
  - a. Medula oblongata
  - b. Thalamus
  - c. Amygdala
  - d. Cerebellum
- 27. Diagram and describe Broadbent's "early" filter model; indicate one piece of empirical evidence against "pure" early selection.

28. List each of Schacter's "Seven Sins of Memory"

i. ii. iii. iv. v. v. vi. vii.

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29. Draw a serial-position curve. Indicate the important components. Be sure to label the axes.

30. Define "release from PI". Describe an experiment that illustrates "release from PI" and the likely results that would be produced.

31. Describe Baddeley's Multicomponent model of working memory.

32. provide one piece of evidence to support the 'dual-coding hypothesis'