

Psychology 3450 Final Exam  
 Saturday, December 11, 2010  
 Dr. C. Penney  
 Version A

Name: \_\_\_\_\_ MUN ID: \_\_\_\_\_

Part A: Multiple Choice. Value: 40 marks or 50%

Answer **40** of the 43 questions by crossing out the appropriate letter on the answer sheet.

1. In using the *representativeness heuristic*, participants ...
  - a) extrapolate from a sample only if they know the population is homogeneous.
  - b) extrapolate from a sample only if they know the population is heterogeneous.
  - c) are more likely to extrapolate from a large than a small sample.
  - d) assume that the population is homogeneous and the sample representative.
  - e) c & d
  
2. Posner and Snyder (1975) presented two letters as the test stimuli and participants had to indicate whether the two letters were the same or different. Prior to the test letters, participants saw a neutral warning signal (+), a valid priming signal (one of the two letters in the test pair), or a misleading signal (a letter not in the test pair). In comparison with a neutral prime, slowing (inhibition) of the response to the test pair occurred ...
  - a) always.
  - b) for a valid prime following several trials with invalid primes.
  - c) when invalid primes seldom occurred in the series of trials.
  - d) when invalid primes frequently occurred in the series of trials.
  - e) Slowing of the response never occurred.
  
3. Which of the following factors will increase the likelihood of implanting a false memory by describing a fictitious event to someone and informing the person that this event happened to them?
  - a) repeating the false information several times
  - b) having the person visualize the event
  - c) describing the event as a very pleasant or happy occasion
  - d) a & b
  - e) a, b, & c
  
4. Which of the following statements about implicit memory is(are) true?
  - a) Implicit memory can be tested in a word-stem completion task.
  - b) Evidence of implicit memory in the absence of explicit memory can be obtained only in neurological patients.
  - c) Repetition priming is an example of implicit memory.
  - d) Evidence of explicit memory in the absence of implicit memory can be obtained in neurological patients.
  - e) All of the above are true.
  
5. People will reject counterfeit money which looks almost identical to real money, but people will accept as a lemon one which has been painted, sweetened sprayed with peppermint flavouring, and cut into slices and dried out. These examples indicate that category membership can be determined by which factors other than similar sensory properties?
  - a) knowledge about “essential properties” of categories.
  - b) our beliefs and knowledge about the categories in question (money and lemons)
  - c) the history of the item; how it came to be the way it is
  - d) a & b
  - e) a, b & c

6. Chase and Simon tested memory for chess pieces arranged on a chess board in novice and expert chess players. Chase and Simon found that ...
  - a) experts had trained their visual memories better than novices and could “see” the board from memory.
  - b) experts had better verbal memories than novices and were better able to rehearse board position.
  - c) experts saw meaningful patterns of pieces and could better associate several pieces into a “chunk”.
  - d) a & b
  - e) a, b & c
  
7. Patients with \_\_\_\_\_ have difficulty comprehending what is said to them but can speak quickly and grammatically. However their speech has little meaningful content. This type of language disorder is produced by damage to ...
  - a) anomia, Wernicke’s area
  - b) anomia, primary motor projection area
  - c) dysfluent aphasia, primary motor projection area
  - d) fluent aphasia, Broca’s area
  - e) fluent aphasia, Wernicke’s area
  
8. Brewer and Treyns had participants wait briefly in an office and then tested participants ability to recall what they had seen in the office. They found that participants recalled ...
  - a) objects in the office very well because most objects were typical of an academic office.
  - b) objects in the office very poorly because most objects were not typically found in an academic office.
  - c) objects which had not been in the office but would usually be found in an academic office.
  - d) objects in a bizarre office better than objects in a more typical office.
  - e) a & c
  
9. Participants in an experiment were told that they had done very well or rather poorly on a task requiring social judgements. Later they were told that the feedback had no relationship to their performance and that participants had randomly received negative or positive feedback. Participants responses to questions on the self-perception questionnaire about social skills administered at the end of the experiment ...
  - a) tended to be consistent with the feedback they had been given.
  - b) tended to be inconsistent with the feedback they had been given.
  - c) had no relationship to the feedback they had been given.
  - d) were consistent with the feedback only if the feedback had been based on performance on the judgement task.
  - e) were consistent with the feedback only if the participants believed that the feedback was accurate.
  
10. Thomas and Lleras (2009) had participants in an experiment attempt to solve the two-string problem. During problem solving, participants had short breaks during which they engaged in mild exercise (either stretching their arms out to the side or swinging their arms). What were Thomas and Lleras studying?
  - a) effectiveness of cues in an insight problem
  - b) usefulness of a short interval away from the problem
  - c) dissipation of set or einstellung
  - d) functional fixedness
  - e) divided attention

11. In an experiment participants memorize a city map and then draw it. On the map, the school and the library are 2 inches apart; the school and the hospital are 4 inches apart. After drawing the map, participants are instructed to form a visual image of the map, and imagine a dot moving from one location to another. If it takes 1.2 sec for the participant to imagine the dot moving from the school to the library, how long will it take to image the dot moving from the school to the hospital?
- Time depends on the number of objects along the path.
  - 0.6 sec
  - 1.2 sec
  - 2.4 sec
  - 3.6 sec
12. The phonemes represented by the letters b, p, and m differ in \_\_\_\_\_ but have the same \_\_\_\_\_.
- manner of articulation, place of articulation
  - nasality, manner of articulation
  - voicing, nasality
  - place of articulation, manner of articulation
  - voicing, nasality
13. Biederman's Recognition By Component (RBC) model of visual perception proposes the existence of *geons*. Which of the following statements are true of geons?
- Geons are simple features such as lines, angles, moving edges etc.
  - Geons are simple shapes such as cylinders, blocks, cones, etc.
  - Geons are complex shapes such as desks, scissors, animals, etc.
  - Geons detectors seem to be innate or mature shortly after birth.
  - a & d
14. The use of an analogy to solve a problem is ...
- more likely to be done by an expert than a novice in a particular field.
  - more likely if the problem bears a superficial resemblance to the analogy situation.
  - more likely if the problem solver has good visual imagery.
  - a & b
  - b & c
15. Participants' introspective reports about the vividness of their visual imagery correlate with performance on ...
- a wide range of visual and spatial imagery tasks but not auditory imagery.
  - spatial imagery tasks but not visual imagery tasks.
  - imagery tasks in all modalities.
  - ability to reinterpret an image of an ambiguous figure.
  - experimenters' expectations in the experiment.
16. Roediger and McDermott (1995) presented lists of words to participants for immediate free recall. All of the words in a list were related to a critical target word which was not presented in the list. In one experiment, after participants had heard and recalled all of the lists they were then given a recognition test and asked to make "remember" or "know" judgements. What did Roediger and McDermott find in their study?
- Recall of the critical target words was about the same as that of recency items.
  - Recall of the critical target words was about the same as that of mid-list items.
  - Participants gave fewer "remember" judgements to critical targets than to studied words.
  - Participants gave the same proportion of "remember" judgements to critical targets and studied words.
  - b & d

17. McDaniel, Roediger & McDermott (2007) reviewed three studies of the effects of testing upon subsequent retention of material. They found that performance on the final memory test was higher on the final retention test ...
- if participants had been given a short-answer test initially rather than a multiple-choice test.
  - if participants had been given a multiple-choice test initially than if participants simply reread the material.
  - if the format of the initial and final tests were the same.
  - a & b
  - a, b & c
18. Research on problems relating to base-rate neglect, sample size and sample bias, and the representativeness heuristic indicates that teaching statistics to students ...
- has little or no effect on errors.
  - reduces errors if the problem is stated in statistical terms.
  - reduces errors only for the students with high grades in statistics courses.
  - reduces errors only for concrete and easily visualizable situations.
  - typically produces a large reductions in errors.
19. In the sentence verification task, participants saw sentences such as, “An emu is a bird”, and “A sparrow is a bird.” Responses to respond “true” to the first sentence will be \_\_\_\_\_ (faster or slower?) because ...
- slower; emus are not typical birds.
  - slower; emus are not true birds, but share some properties (e.g. have feathers, lay eggs).
  - faster; emus are unusual birds and have distinctive associations with the category “birds”.
  - faster; emus are more closely associated with the category “animals” than the category “birds”.
  - the same; both birds share most of the common properties of birds.
20. If information relevant to a decision one is going to make is phrased positively in terms of the gains to be made or benefits of the decision, people tend to ...
- balance the costs and the benefits of the various decision options.
  - focus on maintaining gains or benefits rather than risking costs.
  - focus on maintaining gains or benefits only if costs are very large.
  - focus on risking costs even if benefits are unlikely.
  - focus on risking costs only if benefits are very large.
21. In a study of insight in problem solving, Metcalfe gave students insight problems in which sudden and unexpected reformulations of the problem produce solutions. Metcalfe’s participants gave warmth ratings (closeness to solution) during problem solving. Metcalfe found that warmth ratings ...
- increased slowly and steadily until an idea for solution was obtained.
  - went up and down inconsistently until an idea for solution was obtained.
  - remained fairly low until just before an idea for solution was obtained.
  - were higher when participants ultimately solved the problem correctly than for incorrect solutions.
  - a & d

22. In a study by Loftus, participants saw slides depicting the collision of two cars. Some time later, some participants were asked, "How fast were the cars going when they collided?" Other participants were asked the same question but the word *smashed* was used instead of *collided*. Compared to participants who heard the word *collided*, participants who heard the word *smashed* ...
- rated the cars' speeds as being faster.
  - rated the cars' speeds as being slower.
  - were more likely to report having seen broken glass.
  - were more likely to report the cars' colours correctly.
  - a & c
23. Shepard and Metzler showed participants pairs of drawings of three dimensional objects in different orientations. Participants had to decide whether the two objects were different rotations of the same object or mirror images. Shepard and Metzler found that the time to make a response depended on ...
- how far one object had to be rotated to match (or not) the other object.
  - whether the object was rotated in the plane of the diagram or in depth.
  - whether the participant was a "high visualizer" or "low visualizer".
  - instructions given to the participant about the experimenters' hypotheses.
  - All of the above
24. Basic-level categories ...
- refer to a natural level of categorization used in normal conversation.
  - are the lowest and most specific level of categorization in the hierarchy.
  - usually have one-word names.
  - a & b
  - a & c
25. A sentence such as "Mary saw the mountain climber with a telescope," can have two different meanings. The sentence illustrates ...
- pragmatic ambiguity.
  - phrase structure ambiguity.
  - relative linguistic ambiguity.
  - semantic ambiguity.
  - None of the above.
26. In studies of immediate free recall of a list of 12 to 25 words, which of the following variables has (have) been shown to affect recall of the non-recency items?
- rate of presentation of the words
  - using less familiar or less common words in the list
  - presentation of a distractor task between the end of the list and recall of the words
  - a & b
  - a & c
27. In a problem, a participant sees a piece of white cardboard, four black cardboard squares, some paper clips, and some other objects on a table. In Phase 1, the participants attach the squares to the white cardboard using either paper clips or glue. In Phase 2, the goal is to hang the white cardboard with the black squares attached from an eyelet screwed into the wall. The solution is to partially unbend a paperclip so that it is still bent near each end, then poke one end of the paper clip through the cardboard and hand the cardboard from the eyelet using the other end of the paper clip. The experimenter is probably investigating \_\_\_\_\_ which would be shown by participants who had used the paperclip in Phase 1 ...
- Einstellung; quickly seeing the use of the paperclip in Phase 2.
  - Incubation effect; quickly seeing the use of the paperclip in Phase 2.
  - Functional fixedness; quickly seeing the use of the paperclip in Phase 2.
  - Einstellung; failing to see the use of the paperclip in Phase 2.
  - Functional fixedness; failing to see the use of the paperclip in Phase 2.

28. According to Utility Theory, in making a decision, we consider \_\_\_\_\_ of various outcomes of a decision
- the usefulness
  - the likelihood
  - the subjective value
  - a & c
  - b & c
29. In Nisbett and Schacter's study participants were given electric shocks. Some participants were given a placebo pill and were told it would decrease the pain from the shock. Nisbett and Schacter found that, compared to participants who did not receive the placebo, participants who received the placebo pill ...
- accepted lower shock levels because the pill was less effective than they expected.
  - permitted higher shock levels because they attributed their physiological symptoms to the pill.
  - were more aware of their physiological reactions to the shock.
  - were less aware of their physiological reactions to the shock.
  - a & c
30. Anderson and Helstrup (1993) gave university students three simple symbols (letters, numbers or shapes) and asked them to combine the three symbols into a more complex drawing. The students then described what the drawing showed. The task was done under two conditions: an imagery condition in which the symbols were manipulated mentally only, and a drawing condition in which students were allowed to doodle on paper. Anderson and Helstrup found that students ...
- did the task well in the drawing condition but not in the imagery condition.
  - usually did the task better in the drawing condition than in the imagery condition.
  - did the task well in the imagery condition but sometimes did better in the drawing condition.
  - consistently did the task better in the imagery condition than in the drawing condition.
  - did the task well in the imagery condition, but had great difficulty in the drawing condition
31. Given the statement "No A are B", a participant concludes that No B are A. What type of error has been made?
- Belief bias error
  - Illegal conversion
  - Affirming the antecedent
  - Denying the consequent
  - No error. The reasoning is valid.
32. In Segel and Fusella's experiment participants were asked to detect faint visual lights or auditory tones. At the same time, they formed either auditory or visual images of complex sounds or pictures in a two-by-two design. What did Segel and Fusella find?
- Detection of both visual and auditory stimuli was better if the participants imaged complex sounds.
  - Imagery did not affect the detection task, but auditory stimuli were detected better than visual.
  - Detection did not affect the imagery task, but visual images were more vivid than auditory.
  - Some people had better auditory than visual images while others had better visual images.
  - None of the above.

33. There are cells in the visual system that respond more strongly if there is an edge in their visual fields than if the illumination of the field is uniform. The “edge enhancement” so produced is important in enabling the organism to perceive shapes. What underlying neural process is involved in producing this edge enhancement?
- priming
  - threshold adjustment
  - summation of sub-threshold activation
  - lateral inhibition
  - lateral neural rivalry
34. In network models, subthreshold activation of a node ...
- causes the node to fire but only after a long delay.
  - can summate with other subthreshold activation to cause the node to fire.
  - decays rapidly and typically has no effect.
  - can cause the node to fire if the node is sufficiently primed.
  - b & d
35. Consider the following syllogism in which the conclusion does not follow logically from the premises:  
Some lobbers are flutch  
Some shallers are flutch  
Therefore, some shallers are lobbers. (False)
- The erroneous conclusion is most likely due to..
- affirming the consequent
  - denying the antecedent
  - matching error (sometimes called the atmosphere effect)
  - illegal conversion
  - modus ponens
36. A prototype can be thought of as the most *typical* or average instance of a category. Which of the following types of evidence provides support for the notion of typicality of exemplars of a concept? Compared to less typical exemplars, items similar to the prototype of a category ...
- are produced first in a task which requires recall of category instances.
  - are judged faster to be category instances.
  - are named more quickly with presented as a picture.
  - a & b
  - a, b & c
37. Medin et al. (1999) had university students read different scenarios about selling family owned land to a developer. In the different scenarios, the land had been in the family for either 2 or 200 years, and the land was to be used to build either a shopping mall or a children’s hospital. Medin et al. found that the participants ...
- were less willing to sell if the land had been owned 200 years than 2 years.
  - wanted more money if the land was to be used for a shopping mall than a hospital.
  - felt more negative towards the developer if the land had been owned for 200 years than 2 years.
  - were interested primarily in the money to be paid for the land.
  - a & b

38. Most politicians believe that they will win the election. Their beliefs are probably based on their supporters' frequent reports of positive reactions from people they have canvassed. The supporters probably don't report negative reactions they receive or else they downplay them. The politicians' overestimation of their own popularity is most likely an illustration of ...
- conversion error.
  - atmosphere effects.
  - anchoring effect.
  - illusory correlation.
  - availability heuristic.
39. Suppose you have a set of 10 stimuli which vary in equal steps on an acoustic continuum. Stimulus #1 sounds like *baw* and Stimulus #2 like *gaw*. Perfect categorical perception of these stimuli would be indicated by which of the following?
- Labeling Stimuli #1 to #5 consistently as *baw* and Stimulus #6 to #10 consistently as *gaw*.
  - Perfect discrimination of adjacent stimuli on the acoustic continuum.
  - No ability to discriminate between Stimuli #1 to #5 or between Stimuli #6 to #10.
  - a & b
  - a & c
40. A researcher has determined that the receptive field for a neuron has a centre-surround organization. If the researcher shines a small dot of light on just the very center of the receptive field with no light falling on the periphery of the field, the cell's firing rate will ...
- increase to the maximum.
  - increase moderately.
  - show no change.
  - decrease slightly.
  - decrease below the cell's resting rate.
41. In Anderson's ACT (or ACT - R) model, information is represented in terms of propositions. A proposition ...
- is similar to a sentence in that it can be true or false.
  - is like an association, but there can be different types of association.
  - may include an actor (or agent), a recipient of action (or object), and a description of the action or relation.
  - is a hierarchical representation of conceptual relationships.
  - a & c
42. Which of the following is (are) true of linguistic universals? Linguistic universals ...
- are regularities that are found in all human languages.
  - may relate to features of language that are linked.
  - appear to be innate.
  - a & b
  - a, b & c
43. Because of brain damage resulting from a stroke, a patient loses the ability to see in colour, but shape and movement perception are unaffected. What effect will the brain damage have on the patient's imagery?
- Improved imagery in the auditory modality because of compensation.
  - Decreased ability to visualize shapes, especially shapes that move.
  - Decreased ability to visualize coloured objects.
  - Decreased ability in all types of visual and spatial imagery, but no effect on auditory imagery.
  - No effect on imagery in any modality.



## Part B: Essay Question

Value: 40 marks or 50% of exam

Answer one (1) of the following questions. Do not duplicate material from Part A of the exam unless you provide additional details or discussion. Use note form only if you are very short of time. Where possible, illustrate your arguments by reference to experimental evidence.

1. When we engage in almost any cognitive task, we use knowledge acquired previously. The ability to make use of previous learning depends on how we encoded information at the time, the cues available at the time of retrieval, and the influence of schematic knowledge operating at the times of both learning and retrieval. Give (4) examples showing how previous learning influences judgement, decision making, reasoning, or problems solving consciously or unconsciously; or how previous learning which should be retrieved fails to influence current cognitive processing.
2. The last chapter of Reisberg's book gives numerous examples of unconscious processing. Give four (4) examples showing how unconscious processing provides what Reisberg calls "background" support for conscious processing. In connection with the examples chosen, show how the nature of conscious and unconscious processing differ.
3. People do not usually think like computers. In most situations they do not exhaustively evaluate all possibilities or use formal logic or mathematics to solve problems or to make decisions or judgements. Give four (4) examples showing how people use "quick and dirty" processes (what Reisberg calls System 1 thinking) to reason, to make decisions or judgements, or to solve problems. Discuss the possible advantages and disadvantages of System 1 and System 2 thinking in connection with the examples you have chosen.