

THE UNIVERSITY OF WESTERN ONTARIO
LONDON CANADA

Department of Psychology
Psychology 020

Section 001

~~Psychology~~

Psychology

Midterm Exam Oct. 21, 2006
Time: 2 hours

M. Atkinson

1. Time limit for this exam is 2 hours.
2. Before starting, please print your name, your instructor's name, and the course name at the top of the Scantron sheet. Then indicate your ID number and fill in the **appropriate spaces**. Print your name and student number at the bottom of this sheet as well.
3. There are **65 questions (16 pages)** on this exam. Read each question carefully and choose the **best** alternative. If you change your mind, be sure to erase the first mark completely.
4. There is no correction for guessing, so you should answer all 65 questions. Use the examination paper itself for all calculations or notes. **No electronic devices of any kind are permitted at your desk in the exam room (e.g., calculators, cell phones, pagers, electronic dictionaries, etc.).**
5. When you have completed the exam, raise your hand and one of the proctors will collect your answer sheet, pencil, and the examination paper. You may leave as soon as you are finished, but do so quietly so as not to disturb others.
6. If you have any questions at all, ask one of the proctors for assistance.
7. **NOTE:** All research credits **MUST** be completed by April 12, 2007. All paper reviews must be turned in by 4:00 p.m. on April 12th.

DOES NOT
LEAVE P.R.C.

Name: _____ Date: _____

- B
1. Dr. Kohler is a developmental psychologist who is concerned with some problems in the area of youth sport, such as overly critical coaches and children with poor self-esteem. He conducts research where coaches are observed during games and children are interviewed about their attitudes towards their sport and their coaches. The results from these observations are then used to create an education program for the coaches that is designed to change coaching behaviour and to help increase the self-esteem of the children they coach. Dr. Kohler's research is best characterized as:
A) basic research.
B) applied research.
C) insight research.
D) interaction research.
 2. Susan is attending a seminar on stress management. The psychologist leading the seminar states that "most stress is caused by irrational thinking and the negative ways that we appraise various situations." The psychologist's comments most closely resemble which goal of psychology?
A) description
B) understanding
C) prediction
D) Control
 3. Two psychologists are arguing over the causes of depression. One firmly believes that the disorder has a biological basis and that research should focus on identifying and treating these biological factors. In contrast, the other acknowledges the likely contribution of biology, but asserts that cognitions and thoughts are stronger causes of the disorder and believes that research should instead focus on identifying the key thoughts associated with depression and on effectively changing these thoughts. This difference in opinion can most likely be attributed to the psychologists' different:
A) personalities.
B) educational backgrounds.
C) family histories.
D) psychological perspectives on behaviour.

- 6 4. The statement, "...answers to the great questions of psychology will ultimately be found in 'physiology'... All behaviour, all experience, all feeling, indeed all the subject matter of psychology, are nothing more than the outcomes of the activity of the nervous system" is most consistent with:
- A) dualism.
 - B) monism.
 - C) functionalism.
 - D) structuralism.
- A 5. While structuralists held that psychology should study the basic elements of consciousness, functionalists argued that psychology should concentrate on:
- A) the functions, or "whys," of consciousness.
 - B) how the elements of consciousness are organized into wholes.
 - C) unconscious motivating factors.
 - D) innate human drives to grow and actualize.
- 2 6. Gestalt psychologists would argue that Lee and Freire's illusion in which an oval window surrounding a stretched face appears longer and an oval window surrounding a compressed face appears shorter than they really are demonstrates that:
- A) the most useful way to study perceptions and other mental processes is to break consciousness down into its basic elements.
 - B) our perceptions and other mental processes are organized so that the whole is not only greater than, but also different from, the sum of its parts.
 - C) our tendency to perceive wholes is, like other forms of perceptual organization, not a built-in aspect of our nervous systems.
 - D) the most useful way to study perceptions and other mental processes is to focus on adaptive behaviours that help organisms to respond successfully to their environment and survive.
- H 7. The viewpoint within the cognitive perspective which argues that "reality" is predominantly a mental creation is called:
- A) social constructivism.
 - B) evolutionary psychology.
 - C) sociobiology.
 - D) cognitive neuroscience.
- A 8. The notion of "tabula rasa" is most consistent with which of the following statements?
- A) The environment determines most of our behaviour.
 - B) Biology and genetics determine most of our behaviour.
 - C) Unconscious forces determine most of our behaviour.
 - D) Our innate drive to self-actualize determines most of our behaviour.

- A 9. The humanistic and behavioural perspectives are similar in that:
- A) each acknowledges the importance of the environment.
 - B) each acknowledges the importance of aggressive impulses.
 - C) each focuses on unconscious factors.
 - D) each assumes that human nature is essentially good.
- E 10. Both the psychodynamic and cognitive psychological perspective are typically thought of as operating at:
- A) the biological level of analysis.
 - B) the psychological level of analysis.
 - C) the environmental level of analysis.
 - D) both the biological and environmental levels of analysis.
11. Bob is mildly depressed. Because of his generally negative attitude and hopelessness, Bob's friends, who typically enjoy his company, no longer want to spend time with him. This in turn serves to make Bob even more depressed. The impact of Bob's depression on his friends is an example of:
- A) environmental factors affecting behaviour.
 - B) biological factors affecting behaviour.
 - C) behaviour affecting environmental factors.
 - D) behaviour affecting biological factors.
- D 12. The specialty area in psychology that focuses on how the presence of other people influences an individual's behaviour, thoughts, and feelings is _____
- A) personality psychology.
 - B) cross-cultural psychology
 - C) industrial/organizational psychology
 - D) social psychology
13. One of the main differences between theories and hypotheses is that:
- A) theories tend to be broader than hypotheses.
 - B) hypotheses tend to be broader than theories.
 - C) theories tend to be externally valid while hypotheses tend to be internally valid.
 - D) theories use operational definitions while hypotheses do not.

14. Professor Simple has developed a theory that is rather straightforward compared to the complex theory of Professor Abstract. Both theories generate a number of new hypotheses. Even though both theories predict the same phenomena well, Professor _____ theory is the preferred one because _____.

- A) Simple's; conforms to the law of parsimony.
- B) Simple's; will be easiest to prove.
- C) Abstract's; being complex means it will generate more hypotheses
- D) Abstract's; the complexity allows for more testability

15. One of the major limitations of behavioural observations is that:

- A) people may behave differently when they know they are being watched.
- B) people may not behave differently when they know they are being watched.
- C) people's behaviours may not be internally valid.
- D) researchers may not know what a given physiological response really means.

16. Dr. Jones is interested in conducting a survey of all the college students at her university. She is careful when conducting her research to make sure that each student on campus has an equal chance of participating in her survey. To create her survey sample, Dr. Jones is using:

- A) random sampling.
- B) random assignment.
- C) random preference.
- D) random appointment.

17. Dr. Little has heard that people tend to become more politically conservative as they get older. She decides to conduct a study to see if this is true. She conducts a telephone survey where she asks participants their age and political identification. She then uses statistics to see whether there is a relationship between these two variables. Which of the following research designs best describes Dr. Little's research?

- A) experimental research
- B) correlational research
- C) naturalistic observation
- D) behavioural observation

- B 18. A stress researcher wants to look at the effect of meditation on anxiety. To do this, she creates two groups of subjects: one group receives instruction in meditation, while the other receives no training at all. One month later, she has subjects complete a questionnaire designed to measure anxiety and she looks to see whether there are any differences in anxiety between the two groups. In this experiment, the meditation condition (meditation vs. no meditation) would be the _____ variable and anxiety would be the _____ variable.
- A) dependent; dependent
 - B) independent; dependent
 - C) dependent; independent
 - D) independent; independent
- D 19. In a memory experiment, participants are asked to learn a list of words and then are tested on the list and the number of words they recall is recorded. In total, participants will be learning three word lists. Each of the word lists is of equivalent difficulty, the first list contains proper nouns, the second list, breeds of dogs, and the third is a list of kitchen appliances. After running twenty participants, the researchers notice that participants are better at recalling the proper nouns, the first list of the three that they learn. How can the researchers be certain that proper nouns are actually easier to recall and are not recalled better because they are the first words participants learn?
- A) vary the dependent variable between conditions.
 - B) take a random sample of the participants' answers.
 - C) add a control group that only learns proper nouns.
 - D) counterbalance the order of the word lists.
- P 20. One of the essential differences between experimental research and correlational research is that:
- A) in experimental research all variables are measured, while in correlational research at least one variable is manipulated.
 - B) in correlational research all variables are measured, while in experimental research at least one variable is manipulated.
 - C) experimental research tends to use random sampling, while correlational research tends to use random assignment.
 - D) experimental research tends to have higher external validity than correlational research.

21. Steve is participating in a research study and has been told that the focus of the study is memory. After the experiment begins, Steve notices certain aspects of the experiment and begins making some guesses about what behaviour the researcher might be looking for. In order to be a "good participant," Steve actually modifies his behaviour. This example best demonstrates the problem of:
- A) random sampling.
 - B) the placebo effect.
 - C) experimenter expectancy effects.
 - D) demand characteristics.
22. The main difference between internal validity and external validity is that:
- A) external validity concerns the degree to which the experiment supports clear causal conclusions, while internal validity concerns the generalizability of the results.
 - B) internal validity concerns the degree to which an experiment supports clear causal conclusions, while external validity concerns the generalizability of the results.
 - C) internal validity is based on random sampling, while external validity is based on random selection.
 - D) internal validity is based on dependent variables, while external validity is based on independent variables.
23. Which ethical principle does deception violate?
- A) informed consent
 - B) the right to privacy
 - C) social risk
 - D) psychological risk
24. The double-blind procedure strengthens the internal validity of a study because:
- A) it minimizes the effect of experimenter or participant expectations on the outcome of an experiment.
 - B) it creates more confounding variables in the experiment.
 - C) it eliminates the problem of the social desirability bias.
 - D) it insures that a given sample is representative of the population from which it is drawn.
25. When the charge inside of a neuron shifts from -70 millivolts to $+40$ millivolts, it is called:
- A) polarization.
 - B) depolarization.
 - C) a resting potential.
 - D) an ion channel.

26. The two ways that neurotransmitters can be deactivated are:

- A) postsynaptic reuptake and chemical breakdown.
- B) presynaptic reuptake and chemical breakdown.
- C) presynaptic reuptake and postsynaptic reuptake.
- D) presynaptic reuptake and graded potentials.

27. Acetylcholine (Ach) is known to be involved in:

- A) mood, eating, and sexual behaviour.
- B) disordered thinking and emotions.
- C) reducing pain.
- D) memory and muscle activity.

28. A CT scan is used to study brain _____ while the PET scan is used to examine brain _____.

- A) activity; structures
- B) structures; activity
- C) damage; excitation
- D) excitation; damage

29. Judith has noticed that her elderly husband is behaving differently lately. His movements have become uncoordinated, jerky, and clumsy, and he even has difficulty walking or getting up from a chair. These symptoms are most likely related to a tumor in the:

- A) cerebellum.
- B) pons.
- C) medulla.
- D) reticular formation.

30. The memory of a woman is substantially impaired after she injures her head falling off of a ladder. In particular, she is unable to remember recent events that have happened to her. Damage to which of the following brain areas is most likely responsible for these difficulties?

- A) thalamus
- B) hippocampus
- C) amygdala
- D) hypothalamus

C 31. Which of the following statements about the motor cortex is true?

- A) Larger body areas, such as the torso, have the same amount of motor cortex space devoted to them as smaller areas, such as the fingers.
- B) Smaller body areas, such as the fingers, have less motor cortex space devoted to them than larger body areas, such as the torso.
- C) Body areas associated with complex movements have more motor cortex space devoted to them.
- D) Body areas associated with simple, unrefined movements have more cortex space devoted to them.

A 32. Kyle is a successful trial attorney, particularly adept at his ability to verbally outmaneuver his opponents in the courtroom. Last month Kyle was diagnosed with a degenerative brain disorder. Kyle now wonders how long he will be able to continue working because he is having trouble understanding what his clients are telling him. He hears the words; he is just unable to make sense of their meaning. Which area of the brain would doctors say is most likely involved in his disease?

- A) Wernicke's
- B) Reticular's
- C) Broca's
- D) Sacks'

B 33. A man injures his head in a construction accident. After the incident, he shows a great deal of apathy towards people and things, is emotionally flat, and doesn't seem to care about anything. This person mostly likely suffered damage to his _____ cortex.

- A) occipital
- B) frontal
- C) temporal
- D) parietal

A 34. Mental imagery, the ability to understand spatial relationships, and musical and artistic abilities tend to be located:

- A) in the right hemisphere.
- B) in the left hemisphere.
- C) equally in the left and right hemispheres.
- D) in the parietal lobe.

35. Research on gender differences in the hemispheric localization of language has revealed that:
- A) there is greater left hemisphere lateralization of language in women than in men.
 - B) there is greater left hemisphere lateralization of language in men than in women.
 - C) there is no difference in the hemispheric lateralization of language in men and women.
 - D) men tend to use both hemispheres in a language task, while women tend to only use the left hemisphere.
36. When Leslie was born, the doctor delivering her used forceps applied incorrectly. As a result, Leslie suffered a basal skull fracture and spent the first two weeks of her life in intensive care. Doctors told Leslie's parents that she would experience full recovery but that same fracture is often fatal in twenty year olds. The most likely reason for this is:
- A) Leslie's injury received immediate care.
 - B) brains have greater plasticity in later life.
 - C) the number of synapses increases along with development.
 - D) young children have more brain synapses.
37. The response of the immune system is first triggered by the presence of:
- A) antibodies.
 - B) neurotransmitters.
 - C) hormones.
 - D) antigens.
38. Split-brain research is made possible because of the unique crossover wiring of the optic nerve that occurs at the _____, but the distinctive results of split-brain research will only occur with people who have had their _____ cut.
- A) corpus callosum; hypothalamus
 - B) hypothalamus; corpus callosum
 - C) corpus callosum; optic chiasma
 - D) optic chiasma; corpus callosum
39. Severe damage to the right side of the motor cortex:
- A) would produce paralysis on the right side of the body.
 - B) would produce paralysis on the left side of the body.
 - C) would produce paralysis on both the left and right sides of the body.
 - D) would have no effect on a person.

A

40. At the electrochemical level, the action potential could be described as:

- A) sodium inflow followed by potassium outflow
- B) potassium inflow followed by sodium outflow
- C) hyperpolarization followed by depolarization
- D) depolarization to refractory followed by repolarization of sodium

D

41. Even though a person may have the gene for blue eyes in her chromosomes, it is possible that she may actually have brown eyes because this particular characteristic is recessive. Instances like these most clearly demonstrate the distinction between:

- A) chromosomes and genes
- B) chromosomes and genotype
- C) phenotype and chromosomes
- D) phenotype and genotype

D

42. A dominant gene is one that:

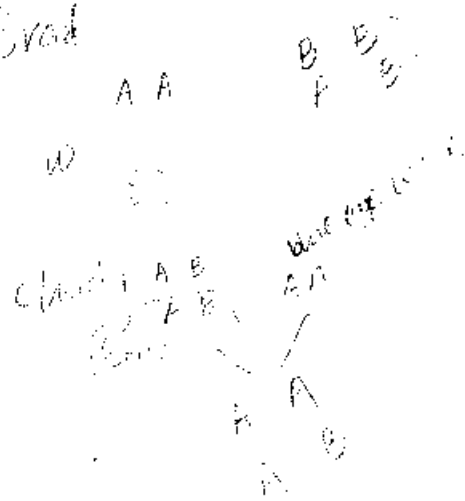
- A) interacts with multiple gene pairs to determine the expression of a single phenotypic characteristic.
- B) determines the expression of the trait it controls only if its gene partner is also dominant.
- C) determines the expression of the trait it controls only if its gene partner is recessive.
- D) directly determines the expression of the trait it controls.

C

43. Brad has blue eyes and his wife has brown eyes. Both of their children have brown eyes. Their eldest son marries a woman with blue eyes, and they are now expecting their first baby. Is it possible for the child to be born with blue eyes?

- A) Yes, the eldest son may carry the recessive gene for blue eyes.
- B) Yes, there is always an equal chance of eye colour being brown or blue.
- C) No, as long as one parent has brown eyes, the child will always have brown eyes.
- D) No, the recessive gene for blue eyes stopped with Brad.

Brad



44. An animal researcher inserts into the body of a mouse a genetic substance that is designed to prevent neurons from responding to dopamine. The researcher then observes the mouse to determine the impact of the absence of dopamine on the mouse's behaviour. This researcher has just utilized what is called the:

- A) knockout procedure
- B) elimination procedure
- C) recombinant procedure
- D) polygenic procedure

45. Assume that the heritability coefficient for intelligence is .50. This means that:

- A) 50 percent of the variation in the intelligence of an individual is related to genetic factors.
- B) 25 percent of the variation in the intelligence of an individual is related to genetic factors.
- C) 50 percent of the variation of intelligence in a specific group of people is related to genetic factors.
- D) Genetic factors have nothing to do with intelligence.

46. Keith and Kirk are identical twins who were separated at birth and raised in different parts of the country in different environments. When as adults they were reunited, researchers compared them on several psychological characteristics. Compared to identical twins who have been raised together, Keith and Kirk probably have:

- A) even more characteristics in common as they were not trying to compete for individuality.
- B) the same level of similarity from those raised together.
- C) fewer characteristics in common because of different environmental influences.
- D) as much in common on their psychological characteristics had they been fraternal twins.

47. According to the notion of a reaction range for intelligence, if Dean has a reaction range that is equivalent to Shannon's and Shannon has experienced a considerably more enriched environment compared to Dean, who would have a higher intelligence score?

- A) Dean would have a higher intelligence score.
- B) Shannon would have a higher intelligence score.
- C) They would both score the same since the reaction range is the same.
- D) Shannon, because women can benefit more from the enriched environment.

- B 48. Domain-specific adaptations refer to adaptations related to:
- A) Achieving skills in a particular domain like math learning.
 - B) Solving particular problems like learning what is safe to eat.
 - C) The growth of particular parts of the brain over time.
 - D) Development of survival skills in particular regions of the world.
- D 49. Parental investment theory states that the male of a species will be larger if parental investment is low because:
- A) males would undertake more survival responsibilities.
 - B) larger size would make males more desirable mating partners for females.
 - C) males would be less active in interaction with off-spring.
 - D) larger size would give males an advantage for male-male competition.
- D 50. Janet is a newly single 29-year old teacher. Which of the following men will Janet find most attractive, according to the text and evolutionary theory?
- A) a 35-year old high school instructor.
 - B) a 20-year old student who wants to go into law.
 - C) a 40-year old artist who has yet to have a good showing of his work.
 - D) a 35-year old lawyer with a convertible car who just made partner in his firm.
- C 51. A mother risks her own life by rushing into a burning house to save her son. According to the _____ she is most likely performing this altruistic behaviour because _____.
- A) norm of social responsibility; she feels she should help when others treat her kindly.
 - B) concept of reciprocal determinism; she feels she should contribute to the welfare of society.
 - C) principle of kin selection; she shares genes with her child.
 - D) norm of reciprocity; it increases the likelihood of receiving help in return.
52. Chimpanzees and humans are unique in their aggressive behaviour in that they
- A) are not aggressive.
 - B) are aggressive only to protect their mates.
 - C) form male coalitions to attack others as a group.
 - D) use aggression to establish dominance.

B 53. Why is genetic determinism not a useful view to hold?

- A) it implies that some people are better than others.
- B) if we believe a certain outcome is inevitable, we do nothing to try to change it.
- C) it enables us to fully explain and understand a behaviour.
- D) if we believe a certain outcome is malleable, we try to change it.

E 54. The final grades for Dr. Valentine's Pasta Appreciation 020 course have been posted. The student's grades tend to cluster tightly around the mean. Thus, we can probably conclude that:

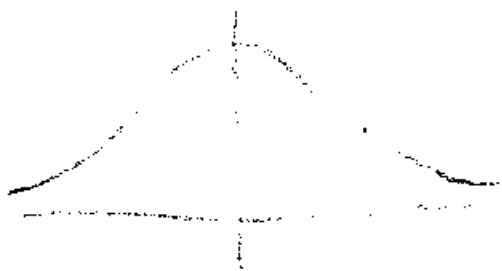
- A) the range is high
- B) the variance is low
- C) the standard deviation is low
- D) the distribution is normal
- E) both B and C above

D 55. You are watching a debate between a biologist and a sociologist. The sociologist claims that cultural factors explain behaviour better than biological factors. What's wrong with his claim?

- A) Biological factors explain behaviour better than cultural factors.
- B) Psychological factors explain behaviour better than either biological or cultural factors.
- C) Individual factors explain behaviour the best.
- D) Both biological and cultural factors explain behaviour equally well, but at different levels of explanation.

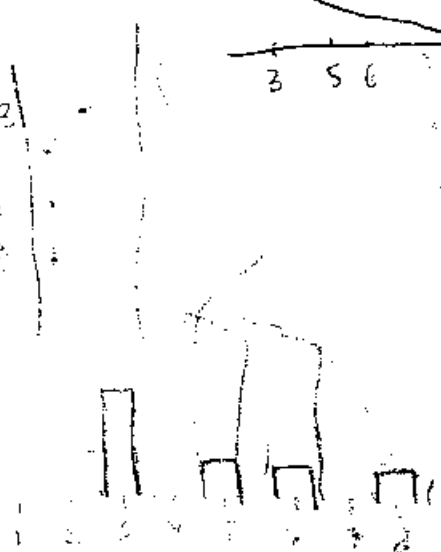
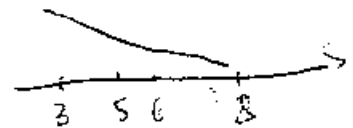
C 56. Consider the following distribution: 3, 3, 8, 6, 5. Which of the following is true regarding measures of central tendency?

- A) The mean is less than the mode.
- B) The median is 8.
- C) The median is equal to the mean.
- D) The distribution is normal.
- E) C and D above



freq (x)
13

3 3 8 6 5



57. In class, I described a taste-test study where the researchers found that people preferred the taste of Pepsi over the taste of Coke. The study was biased. Which of the following would be a good way to eliminate the bias?
- A) For half the trials use the letter "M" for Pepsi and the letter "N" for Coke, switching the letters for the remaining trials.
 - B) Use the letter "A" for Pepsi and the letter "Z" for Coke.
 - C) Use the number "1" for Pepsi and the number "2" for Coke.
 - D) Use a combination of numbers and letters; "A1" for Pepsi and "B2" for Coke.
58. Since everyone tasted both Pepsi and Coke in the taste-test experiment, the design was:
- A) a between subjects design
 - B) a within subjects design
 - C) a correlational design
 - D) an observational design
 - E) a blind subjects design
59. The maximum firing rate for a neuron is limited by:
- A) the length of the neuron's axon.
 - B) the number of dendritic connections.
 - C) the neuron's relative refractory period.
 - D) the neuron's absolute refractory period.
 - E) the type of neurotransmitter in the vesicles.
60. A left-handed split brain patient is shown a picture of a bird in his right visual field and a picture of a tree in his left visual field. When asked to say what he saw, the patient will reply:
- A) a bird
 - B) a tree
 - C) a bird in a tree
 - D) he will say that he saw nothing
 - E) can't tell—depends on where language is lateralized
61. According to Berkowitz, the presence of weapons can result in increased aggression because:
- A) they function much like releasers.
 - B) they reflect genetic drift.
 - C) they build up Thanatos energy.
 - D) they are readily available to be used for aggression.

62. George recently had a stroke and when he got up this morning he only shaved the right hand side of his face. You suspect _____ with damage to _____.
- A) aphasia; Wernicke's area
 - B) apraxia; motor cortex
 - C) hemispatial neglect; right parietal and temporal lobes
 - D) split-brain disorder; the corpus callosum
 - E) lateralization; left hemisphere
63. One of your friends has just given birth to a new baby boy. A routine DNA test reveals that the baby has a rare condition caused by a single dominant gene. Most likely, the baby will develop:
- A) PKU
 - B) Huntington's
 - C) Down syndrome
 - D) Male-pattern baldness
 - E) Alzheimer's
64. Neuron A synapses with three others: Neuron B, Neuron C and Neuron D. You are measuring the electrical activity in Neuron A. When Neuron B fires, Neuron A becomes hyperpolarized. If Neuron B and Neuron C fire together, Neuron A remains at resting potential. If all Neurons B, C and D fire together, Neuron A generates an action potential. What might we conclude about these neurons?
- A) Neuron B is excitatory.
 - B) Neuron C generates an EPSP equal to the IPSP from Neuron B.
 - C) All three neurons generate EPSPs.
 - D) Only Neuron C and Neuron D result in graded potentials at the dendrite.
 - E) A and B above.

- B 65. Dr. Gupta is testing the antioxidant ability of blueberries to help improve memory. One group of participants is asked to eat 500 ml. of blueberries every day for a week while they study for a Psychology exam. A second group eats a 500 ml. portion of broccoli every day for a week while studying for the same exam. A third group eats 500 ml. of French fries, also while studying for the same exam. A fourth group is simply asked to study for the exam, but they do not receive any food. At the end of one week, a surprise recall test is given on the Psychology material. The results indicated that those who ate blueberries actually remembered more psychology than either of the other groups. In this study, the independent variable is:
- A) the blueberries
 - B) the type of food eaten
 - C) recall for psychology material
 - D) the blueberries and the broccoli versus the French fries

