

Exam

Name \_\_\_\_\_

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 1) Regulation of the autonomic nervous system occurs via the sympathetic nervous system and the parasympathetic nervous system. 1) \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 2) The nervous system as a whole consists of the \_\_\_\_\_ and the \_\_\_\_\_. 2) \_\_\_\_\_  
A) sensory nervous system; motor nervous system  
B) sympathetic nervous system; parasympathetic nervous system  
C) brain; spinal cord  
D) somatic nervous system; autonomic nervous system  
E) central nervous system; peripheral nervous system

- 3) The peripheral nervous system consists of the \_\_\_\_\_ and the \_\_\_\_\_. 3) \_\_\_\_\_  
A) central nervous system; parasympathetic nervous system  
B) brain; spinal cord  
C) central nervous system; sympathetic nervous system  
D) somatic nervous system; autonomic nervous system  
E) central nervous system; somatic nervous system

- 4) The \_\_\_\_\_ nervous system connects the central nervous system with all internal organs. 4) \_\_\_\_\_  
A) sympathetic  
B) parasympathetic  
C) peripheral  
D) autonomic  
E) somatic

- 5) The \_\_\_\_\_ nervous system mobilizes the body in response to stress; the \_\_\_\_\_ nervous system controls the activities of the visceral organs under normal conditions. 5) \_\_\_\_\_  
A) sympathetic; parasympathetic  
B) parasympathetic; sympathetic  
C) sympathetic; peripheral  
D) autonomic; peripheral  
E) somatic; autonomic

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 6) The structures of the limbic system play an important role in stress and emotional responses. 6) \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 7) Damage to the cerebellum is associated with impaired \_\_\_\_\_  
A) muscular coordination.  
B) speech production.  
C) respiration.  
D) speech recognition.  
E) visual acuity.
- 8) The \_\_\_\_\_ is an important transition centre between the thoughts generated in the cerebral cortex of the brain and their impact on internal organs. \_\_\_\_\_  
A) hindbrain  
B) hypothalamus  
C) primary somatic sensory cortex  
D) forebrain  
E) medulla
- 9) Catecholamines are \_\_\_\_\_  
A) neurotransmitters.  
B) specific genes.  
C) found only in the central nervous system.  
D) neural receptors.  
E) secretions of the limbic system.
- 10) Secretion of catecholamines \_\_\_\_\_  
A) regulates sodium retention.  
B) increases heart rate and blood pressure.  
C) increases protein and fat mobilization.  
D) stimulates digestion.  
E) dilates blood vessels.
- 11) Mark has been preparing for his graduate school entrance exam for several weeks and is very nervous about how he will perform. In addition to this stress, his girlfriend Jasmine is getting concerned that Mark has not been able to perform in the bedroom lately either. Mark's sexual difficulties due to stress are likely due to the involvement of his \_\_\_\_\_ in the stress response. \_\_\_\_\_  
A) parietal lobe  
B) pituitary gland  
C) adrenal medulla  
D) hypothalamus  
E) limbic system

- 12) John does not have smooth motor coordination. His rigid, slow movements are accompanied with tremors. John's condition is known as \_\_\_\_\_. 12) \_\_\_\_\_
- A) cerebral palsy
  - B) epilepsy
  - C) multiple sclerosis
  - D) Parkinson's disease
  - E) Alzheimer's disease
- 13) The prevalence of \_\_\_\_\_ is expected to rise to affect over 100 million people worldwide by the year 2050. 13) \_\_\_\_\_
- A) AIDS
  - B) Alzheimer's disease
  - C) heart disease
  - D) Huntington's disease
  - E) arthritis
- 14) \_\_\_\_\_ is a chronic, nonprogressive disorder of the nervous system that is marked by lack of muscle control. 14) \_\_\_\_\_
- A) Cerebral palsy
  - B) Myasthenia gravis
  - C) Epilepsy
  - D) Multiple Sclerosis
  - E) Parkinson's disease
- 15) Blood supply to Marsha's brain was interrupted during her birth because of which she lacks control of her muscles. Marsha has \_\_\_\_\_. 15) \_\_\_\_\_
- A) epilepsy
  - B) cerebral palsy
  - C) Parkinson's disease
  - D) multiple sclerosis
  - E) myasthenia gravis
- 16) The gene for \_\_\_\_\_ has been identified. This allows for at-risk individuals to be tested to ascertain whether they are carriers of this hereditary disorder characterized by chronic physical and mental deterioration due to damaged brain cells. 16) \_\_\_\_\_
- A) epilepsy
  - B) Huntington's disease
  - C) myasthenia gravis
  - D) multiple sclerosis
  - E) Parkinson's disease

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 17) The endocrine system is responsible for fast-acting, short-duration responses to changes in the body. 17) \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 18) The nervous system is chiefly responsible for \_\_\_\_\_ responses to changes in the body; whereas the endocrine system governs mainly \_\_\_\_\_ responses. 18) \_\_\_\_\_
- A) slow-acting, long-duration; fast-acting, short-duration
  - B) complementary; antagonistic
  - C) fast-acting, short-duration; slow-acting, long-duration
  - D) slow-acting, short-duration; fast-acting, long-duration
  - E) fast-acting, long-duration; slow-acting, short-duration
- 19) The release of steroids via the adrenal cortex is stimulated by 19) \_\_\_\_\_
- A) vasopressin.
  - B) epinephrine and norepinephrine.
  - C) adrenocorticotrophic hormone (ACTH).
  - D) thyrotropic hormone (TSH).
  - E) glucocorticoids.
- 20) Type I diabetes 20) \_\_\_\_\_
- A) is primarily managed through dietary and exercise regimens.
  - B) typically occurs after age 40.
  - C) is a condition that occurs when the body fails to produce enough insulin.
  - D) disproportionately affects white males.
  - E) is a condition that occurs when the body is not sufficiently responsive to insulin.
- 21) Conditions associated with diabetes include 21) \_\_\_\_\_
- A) deafness.
  - B) loss of hair.
  - C) coronary heart disease.
  - D) skeletal system damage.
  - E) colour blindness.
- 22) The \_\_\_\_\_ carry blood from the heart to oxygenate other organs and tissues. 22) \_\_\_\_\_
- A) capillaries
  - B) atria
  - C) veins
  - D) ventricles
  - E) arteries
- 23) During \_\_\_\_\_, blood is pumped out of the heart, and blood pressure \_\_\_\_\_. 23) \_\_\_\_\_  
During \_\_\_\_\_, blood is taken into the heart, and blood pressure \_\_\_\_\_.
- A) systole; decreases; diastole; increases
  - B) diastole; decreases; systole; decreases
  - C) diastole; increases; systole; decreases
  - D) systole; increases; diastole; decreases
  - E) diastole; decreases; systole; increases

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

24) Angina pectoris is most likely to occur when a clot has developed in a coronary vessel and blocks the flow of blood to the heart. 24) \_\_\_\_\_

25) Arteriosclerosis results when elasticity of arteries decreases making them rigid and hard. 25) \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

26) \_\_\_\_\_ is chest pain which occurs because the muscle tissue of the heart must continue its activity without a sufficient supply of oxygen or adequate removal of carbon dioxide and other waste products. 26) \_\_\_\_\_

- A) Myocardial infarction
- B) Phlebitis
- C) Arteriosclerosis
- D) Aneurysm
- E) Angina pectoris

27) Atherosclerosis is 27) \_\_\_\_\_

- A) characterized by a hardening and reduced elasticity of the arterial walls.
- B) a type of blood disorder.
- C) associated with angina pectoris and myocardial infarction.
- D) a nervous system disorder.
- E) a hereditary disease rather than a disease of lifestyle.

28) Hypertension is caused by 28) \_\_\_\_\_

- A) consuming a diet rich in protein.
- B) high cardiac output.
- C) being underweight.
- D) exercising too much.
- E) meditation.

29) Approximately \_\_\_\_\_% of Canadians aged 12 and over have hypertension. 29) \_\_\_\_\_

A) 10                      B) 26                      C) 14                      D) 18                      E) 22

30) Approximately 55% of blood volume is composed of 30) \_\_\_\_\_

- A) platelets.
- B) red blood cells.
- C) white blood cells.
- D) hemoglobin.
- E) plasma.

- 31) Some individuals are unable to produce thromboplastin and fibrin. This condition is associated with a clotting disorder called \_\_\_\_\_ 31) \_\_\_\_\_
- A) hemophilia.
  - B) anemia.
  - C) erythrocytosis.
  - D) leukopenia.
  - E) arteriosclerosis.
- 32) Lymphocytes play an important role in fighting infection and disease by \_\_\_\_\_ 32) \_\_\_\_\_
- A) producing antibodies that destroy substances through the antigen-antibody reaction.
  - B) secreting platelets that engulf foreign particles so they may be excreted.
  - C) secreting digesting enzymes that dissolve foreign particles.
  - D) producing monoblasts that increase the amount of hemoglobin in the blood.
  - E) carrying oxygen and carbon dioxide throughout the body.
- 33) Amy contracted influenza from school where many children in her class have also had the disease. This is an example of \_\_\_\_\_ transmission. 33) \_\_\_\_\_
- A) mechanical
  - B) direct
  - C) chemical
  - D) indirect
  - E) biological
- 34) The course of infection follows a specific sequence; that is \_\_\_\_\_ 34) \_\_\_\_\_
- A) period of nonspecific symptoms, incubation period, acute phase, period of decline.
  - B) acute phase, incubation period, period of nonspecific symptoms, period of decline.
  - C) incubation period, period of nonspecific symptoms, period of decline, recovery.
  - D) incubation period, period of nonspecific symptoms, acute phase, period of decline.
  - E) incubation period, acute phase, period of decline.
- 35) A localized infection \_\_\_\_\_ 35) \_\_\_\_\_
- A) is confined to a particular site and does not spread.
  - B) occurs when the body's resistance is lowered from fighting a primary infection.
  - C) affects several different areas.
  - D) is confined to a particular area and sends toxins to other parts of the body.
  - E) is confined to a particular site at first and then starts spreading to other parts of the body within 48 hours.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 36) Antigens are proteins produced in response to stimulation by antibodies. 36) \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 37) Nonspecific immunity may be mediated by 37) \_\_\_\_\_  
A) having vitamins regularly.  
B) vaccinations.  
C) antimicrobial substances.  
D) inoculations.  
E) consuming a healthy diet.
- 38) Jamie had an outbreak of measles. Her body has now built \_\_\_\_\_ immunity for 38) \_\_\_\_\_  
measles.  
A) artificial  
B) natural  
C) acquired  
D) specific  
E) nonspecific
- 39) Humoral immunity is mediated by 39) \_\_\_\_\_  
A) B cells and helper and suppressor T cells.  
B) B cells.  
C) phagocytosis.  
D) T cells.  
E) helper and suppressor T cells.
- 40) Cell-mediated immunity is mediated by 40) \_\_\_\_\_  
A) TC and TH cells.  
B) B cells.  
C) NK cells.  
D) interferon.  
E) B cells and helper and suppressor T cells.
- 41) The spleen 41) \_\_\_\_\_  
A) aids in the production of B and T cells and filters the blood.  
B) secretes insulin and bile into the bloodstream.  
C) produces plasma cells.  
D) produces red blood cells.  
E) produces neurotransmitters and corticosteroids.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

- 42) Compared to women, men are at greater risk of contracting autoimmune disease. 42) \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 43) Infectious disorders 43) \_\_\_\_\_  
A) are genetic.  
B) are acute problems that end when their course has run.  
C) attack only lymphatic tissue.  
D) are not linked to the development of any chronic diseases.  
E) that are kept in control through hygiene may have paradoxically increased the rates of these disorders.
- 44) Infectious disorders 44) \_\_\_\_\_  
A) are genetic.  
B) do not strike in developed nations.  
C) can be treated effectively with overdoses of antibiotics.  
D) may be a result of advanced sanitation and refrigeration.  
E) do not cause chronic diseases.
- 45) Autoimmunity 45) \_\_\_\_\_  
A) is acquired through measures such as vaccination.  
B) is a condition seen only in women.  
C) involves the progressive, chronic enlargement of lymphatic tissue.  
D) is a condition in which a specific humoral or cell-mediated immune response attacks the body's own tissue.  
E) is a viral disorder marked by an unusually large number of monocytes.
- 46) Autoimmunity may be implicated in 46) \_\_\_\_\_  
A) arthritis.  
B) typhoid.  
C) diabetes.  
D) hypertension.  
E) jaundice.
- 47) Systemic lupus erythematosus is \_\_\_\_\_. 47) \_\_\_\_\_  
A) a birth-related disorder  
B) an infectious disorder  
C) a genetic disorder  
D) an autoimmune disorder  
E) an age-related disorder
- 48) Inflammation is also implicated in 48) \_\_\_\_\_  
A) leukemia.  
B) strokes.  
C) hemophilia.  
D) asthma.  
E) renal failure.

- 49) The adrenal cortex produces \_\_\_\_\_ in response to stress. 49) \_\_\_\_\_
- A) epinephrine and norepinephrine
  - B) glucocorticoids
  - C) oxytocin
  - D) ACTH
  - E) endogenous opioids
- 50) The activation of the hypothalamic-pituitary-adrenocortical (HPA) axis most closely resembles the \_\_\_\_\_ model of stress. 50) \_\_\_\_\_
- A) primary appraisal
  - B) general adaptation syndrome
  - C) tend and befriend
  - D) fight or flight
  - E) sympathetic arousal

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

- 51) Describe the functioning of the autonomic nervous system. Include in your answer the roles of the sympathetic and parasympathetic nervous system in response to stress.
- 52) Describe the structure and function of the cardiovascular system. Include in your answer the internal and external factors influencing heart rate and their impact on heart functioning.
- 53) Compare and contrast nonspecific and specific immune mechanisms. Provide at least two examples of each.
- 54) Explain how the sympathetic-adrenomedullary (SAM) and hypothalamic-pituitary-adrenocortical (HPA) axis are implicated in the physiological response to stress. Support your answer with a diagram.

## Answer Key

Testname: UNTITLED2

- 1) TRUE
- 2) E
- 3) D
- 4) D
- 5) A
- 6) TRUE
- 7) A
- 8) B
- 9) A
- 10) B
- 11) D
- 12) D
- 13) B
- 14) A
- 15) B
- 16) B
- 17) FALSE
- 18) C
- 19) C
- 20) C
- 21) C
- 22) E
- 23) D
- 24) FALSE
- 25) TRUE
- 26) E
- 27) C
- 28) B
- 29) D
- 30) E
- 31) A
- 32) A
- 33) D
- 34) D
- 35) A
- 36) FALSE
- 37) C
- 38) B
- 39) B
- 40) A
- 41) A
- 42) FALSE
- 43) E
- 44) D
- 45) D
- 46) A
- 47) D
- 48) D
- 49) B
- 50) B

Answer Key

Testname: UNTITLED2

- 51) Answers may vary.
- 52) Answers may vary.
- 53) Answers may vary.
- 54) Answers may vary.