

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.

Answer:  True       False

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 \_\_\_\_\_.

- A) sympathetic nervous system; parasympathetic nervous system
- B) sensory nervous system; motor nervous system
- C) somatic nervous system; autonomic nervous system
- D) brain; spinal cord
- E) central nervous system; peripheral nervous system

Answer: E

- 3) The peripheral nervous system consists of the \_\_\_\_\_ and the \_\_\_\_\_.

- A) central nervous system; parasympathetic nervous system
- B) somatic nervous system; autonomic nervous system
- C) central nervous system; somatic nervous system
- D) central nervous system; sympathetic nervous system
- E) brain; spinal cord

Answer: B

- 4) The \_\_\_\_\_ nervous system connects the central nervous system with all internal organs.

- A) peripheral
- B) sympathetic
- C) autonomic
- D) somatic
- E) parasympathetic

Answer: C

- 5) The \_\_\_\_\_ nervous system mobilizes the body in response to stress; the \_\_\_\_\_ nervous system controls the activities of the visceral organs under normal conditions.

- A) parasympathetic; sympathetic
- B) sympathetic; peripheral
- C) sympathetic; parasympathetic
- D) somatic; autonomic
- E) autonomic; peripheral

Answer: C

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.

Answer:  True       False

**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) speech production.
- B) respiration.
- C) muscular coordination.
- D) visual acuity.
- E) speech recognition.

Answer: C

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) medulla
- B) hindbrain
- C) forebrain
- D) hypothalamus
- E) primary somatic sensory cortex

Answer: D

9) Catecholamines are

- A) specific genes.
- B) found only in the central nervous system.
- C) neurotransmitters.
- D) secretions of the limbic system.
- E) neural receptors.

Answer: C

10) Secretion of catecholamines

- A) regulates sodium retention.
- B) increases heart rate and blood pressure.
- C) stimulates digestion.
- D) increases protein and fat mobilization.
- E) dilates blood vessels.

Answer: B

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) hypothalamus
- B) parietal lobe
- C) adrenal medulla
- D) pituitary gland
- E) limbic system

Answer: A

- 12) John does not have smooth motor coordination. His rigid, slow movements are accompanied with tremors. John's condition is known as \_\_\_\_\_.
- A) multiple sclerosis
  - B) epilepsy
  - C) Parkinson's disease
  - D) cerebral palsy
  - E) Alzheimer's disease

Answer: C

- 13) The prevalence of \_\_\_\_\_ is expected to rise to affect over 100 million people worldwide by the year 2050.
- A) Alzheimer's disease
  - B) Huntington's disease
  - C) heart disease
  - D) arthritis
  - E) AIDS

Answer: A

- 14) \_\_\_\_\_ is a chronic, nonprogressive disorder of the nervous system that is marked by lack of muscle control.
- A) Parkinson's disease
  - B) Multiple Sclerosis
  - C) Cerebral palsy
  - D) Epilepsy
  - E) Myasthenia gravis

Answer: C

- 15) Blood supply to Marsha's brain was interrupted during her birth because of which she lacks control of her muscles. Marsha has \_\_\_\_\_.
- A) epilepsy
  - B) cerebral palsy
  - C) multiple sclerosis
  - D) Parkinson's disease
  - E) myasthenia gravis

Answer: B

- 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.
- A) epilepsy
  - B) Parkinson's disease
  - C) multiple sclerosis
  - D) Huntington's disease
  - E) myasthenia gravis

Answer: D

**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.

Answer: True  False

**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.

- A) slow-acting, short-duration; fast-acting, long-duration
- B) fast-acting, short-duration; slow-acting, long-duration
- C) slow-acting, long-duration; fast-acting, short-duration
- D) complementary; antagonistic
- E) fast-acting, long-duration; slow-acting, short-duration

Answer: B

19) The release of steroids via the adrenal cortex is stimulated by

- A) vasopressin.
- B) epinephrine and norepinephrine.
- C) glucocorticoids.
- D) adrenocorticotrophic hormone (ACTH).
- E) thyrotrophic hormone (TSH).

Answer: D

20) Type I diabetes

- A) typically occurs after age 40.
- B) is primarily managed through dietary and exercise regimens.
- 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.

Answer: C

21) Conditions associated with diabetes include

- A) loss of hair.
- B) colour blindness.
- C) deafness.
- D) skeletal system damage.
- E) coronary heart disease.

Answer: E

22) The \_\_\_\_\_ carry blood from the heart to oxygenate other organs and tissues.

- A) atria
- B) ventricles
- C) veins
- D) capillaries
- E) arteries

Answer: E

- 23) During \_\_\_\_\_, blood is pumped out of the heart, and blood pressure \_\_\_\_\_. During \_\_\_\_\_, blood is taken into the heart, and blood pressure \_\_\_\_\_.
- A) systole; increases; diastole; decreases
  - B) systole; decreases; diastole; increases
  - C) diastole; increases; systole; decreases
  - D) diastole; decreases; systole; decreases
  - E) diastole; decreases; systole; increases

Answer: A

**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.

Answer: True  False

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

Answer:  True  False

**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.

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

Answer: E

- 27) Atherosclerosis is

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

Answer: E

- 28) Hypertension is caused by

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

Answer: A

- 29) Approximately \_\_\_\_\_% of Canadians aged 12 and over have hypertension.  
A) 18                      B) 14                      C) 26                      D) 22                      E) 10

Answer: A

- 30) Approximately 55% of blood volume is composed of  
A) red blood cells.  
B) white blood cells.  
C) plasma.  
D) platelets.  
E) hemoglobin.

Answer: C

- 31) Some individuals are unable to produce thromboplastin and fibrin. This condition is associated with a clotting disorder called  
A) hemophilia.  
B) anemia.  
C) erythrocytosis.  
D) leukopenia.  
E) arteriosclerosis.

Answer: A

- 32) Lymphocytes play an important role in fighting infection and disease by  
A) producing antibodies that destroy substances through the antigen-antibody reaction.  
B) producing monoblasts that increase the amount of hemoglobin in the blood.  
C) carrying oxygen and carbon dioxide throughout the body.  
D) secreting platelets that engulf foreign particles so they may be excreted.  
E) secreting digesting enzymes that dissolve foreign particles.

Answer: A

- 33) Amy contracted influenza from school where many children in her class have also had the disease. This is an example of \_\_\_\_\_ transmission.  
A) chemical              B) biological              C) indirect              D) direct              E) mechanical

Answer: C

- 34) The course of infection follows a specific sequence; that is  
A) incubation period, period of nonspecific symptoms, period of decline, recovery.  
B) incubation period, period of nonspecific symptoms, acute phase, period of decline.  
C) incubation period, acute phase, period of decline.  
D) period of nonspecific symptoms, incubation period, acute phase, period of decline.  
E) acute phase, incubation period, period of nonspecific symptoms, period of decline.

Answer: B

35) A localized infection

- A) is confined to a particular area and sends toxins to other parts of the body.
- B) is confined to a particular site and does not spread.
- C) is confined to a particular site at first and then starts spreading to other parts of the body within 48 hours.
- D) affects several different areas.
- E) occurs when the body's resistance is lowered from fighting a primary infection.

Answer: B

**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.

Answer: True  False

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

37) Nonspecific immunity may be mediated by

- A) antimicrobial substances.
- B) consuming a healthy diet.
- C) having vitamins regularly.
- D) vaccinations.
- E) inoculations.

Answer: A

38) Jamie had an outbreak of measles. Her body has now built \_\_\_\_\_ immunity for measles.

- A) artificial
- B) natural
- C) acquired
- D) nonspecific
- E) specific

Answer: B

39) Humoral immunity is mediated by

- A) phagocytosis.
- B) T cells.
- C) B cells and helper and suppressor T cells.
- D) B cells.
- E) helper and suppressor T cells.

Answer: D

40) Cell-mediated immunity is mediated by

- A) NK cells.
- B) B cells and helper and suppressor T cells.
- C) TC and TH cells.
- D) interferon.
- E) B cells.

Answer: C

41) The spleen

- A) produces plasma cells.
- B) produces neurotransmitters and corticosteroids.
- C) secretes insulin and bile into the bloodstream.
- D) aids in the production of B and T cells and filters the blood.
- E) produces red blood cells.

Answer: D

**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.

Answer: True  False

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

43) Infectious disorders

- A) that are kept in control through hygiene may have paradoxically increased the rates of these disorders.
- B) are genetic.
- C) are not linked to the development of any chronic diseases.
- D) are acute problems that end when their course has run.
- E) attack only lymphatic tissue.

Answer: A

44) Infectious disorders

- A) are genetic.
- B) do not strike in developed nations.
- C) may be a result of advanced sanitation and refrigeration.
- D) can be treated effectively with overdoses of antibiotics.
- E) do not cause chronic diseases.

Answer: C

45) Autoimmunity

- A) involves the progressive, chronic enlargement of lymphatic tissue.
- B) is a condition in which a specific humoral or cell-mediated immune response attacks the body's own tissue.
- C) is a condition seen only in women.
- D) is acquired through measures such as vaccination.
- E) is a viral disorder marked by an unusually large number of monocytes.

Answer: B



46) Autoimmunity may be implicated in

- A) arthritis.
- B) jaundice.
- C) typhoid.
- D) hypertension.
- E) diabetes.

Answer: A

47) Systemic lupus erythematosus is \_\_\_\_\_.

- A) a genetic disorder
- B) an autoimmune disorder
- C) a birth-related disorder
- D) an infectious disorder
- E) an age-related disorder

Answer: B

48) Inflammation is also implicated in

- A) renal failure.
- B) strokes.
- C) leukemia.
- D) asthma.
- E) hemophilia.

Answer: D

49) The adrenal cortex produces \_\_\_\_\_ in response to stress.

- A) glucocorticoids
- B) epinephrine and norepinephrine
- C) oxytocin
- D) endogenous opioids
- E) ACTH

Answer: A

50) The activation of the hypothalamic-pituitary-adrenocortical (HPA) axis most closely resembles the \_\_\_\_\_ model of stress.

- A) fight or flight
- B) primary appraisal
- C) sympathetic arousal
- D) tend and befriend
- E) general adaptation syndrome

Answer: E

**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.

Answer: Answers may vary.

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.

Answer: Answers may vary.

53) Compare and contrast nonspecific and specific immune mechanisms. Provide at least two examples of each.

Answer: Answers may vary.

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: Answers may vary.

## Answer Key

Testname: UNTITLED43

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

## Answer Key

Testname: UNTITLED43

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