1. **True or False** subdural hematomas slowly progress while epidural hematomas often produce rapid life-threatening symptoms

2. **True or False** Guillain-Barre begins in the lower extremities

3. **True or False** low oxygen delivery to the fetus could result in cerebral palsey

4. **True or False** Parkinson's results in hyperkinesia

5. **True or False** rapidly cooling Dr. Dugan after her heat exhaustion at LA Fitness is wise first aid

6. **True or False** malignant hyperthermia is cancer of the brainstem

7. **True or False** fibers descending from the PAG release serotonin (5-HT) which attenuates ascending pain fibers

8. **True or False** inflammation plays a key role in allodynia but not hyperalgesia

9. Which is/are consequence(s) of poor sleep
   A. obesity
   B. nasty mood
   C. suppressed immunity
   D. poorer cognition
   E. all of the above can result from poor sleep

10. A 25-year-old male was in an automobile accident. At impact, his forehead struck the windshield. In this situation, the coup injury would occur in the:
   A. frontal region.
   B. temporal region.
   C. parietal region.
   D. occipital region.

11. The main source of bleeding in extradural (epidural) hematomas is:
   A. arterial.
   B. venous.
   C. capillary.
   D. sinus.
12. Six weeks ago a female patient suffered a T6 spinal cord injury. She then developed a blood pressure of 200/120, a severe headache, blurred vision, and bradycardia. She is likely experiencing:
A. extreme spinal shock.
B. acute anxiety.
C. autonomic hyperreflexia.
D. parasympathetic areflexia.

13. A 20-year-old female suffered from spinal cord injury that resulted from a motor vehicle accident. She had spinal shock lasting 15 days and is now experiencing an un-compensated cardiovascular response to sympathetic stimulation. This condition may accompany:
A. toxic accumulation of free radicals below the level of the injury.
B. pain stimulation above the level of the spinal cord lesion.
C. a distended bladder or rectum.
D. an abnormal vagal response.

14. A 50-year-old male presents with low back pain. He denies trauma and says he just woke up and it was hurting. An MRI reveals that the vertebra at L5 slid forward relative to those above and below it. This condition is called:
A. degenerative disk disease.
B. spondylolysis.
C. spondylolisthesis.
D. spinal stenosis.

15. A 72-year-old male demonstrates left-sided weakness of upper and lower extremities. The symptoms disappear in 24 hours. He most likely experienced a(n):
A. stroke-in-evolution.
B. arteriovenous malformation.
C. transient ischemic attack.
D. cerebral hemorrhage.

16. A major contributing process in cerebrovascular accidents (CVA) is the development of atheromatous plaques in cerebral circulation. These most commonly form:
A. in the larger veins.
B. near capillary sphincters.
C. in cerebral arteries.
D. in the venous sinuses.

17. A 60-year-old female with a recent history of head trauma and a long-term history of hypertension presents to the ER for changes in mental status. MRI reveals that she had a hemorrhage stroke. This type of stroke is often caused by:
A. rheumatic heart disease.
B. thrombi.
C. aneurysms.
D. hypotension.
18. A cause of hydrocephalus in subarachnoid hemorrhage is:
A. scarring of meninges and impairment of CSF resorption.
B. choroid plexus injury.
C. impairment of CSF flow through the ventricles.
D. vasoconstriction related to CO₂ changes in the cerebral circulation.

19. A 25-year-old female presents to her physician complaining of fever, headache, nuchal rigidity, and decreased consciousness. She was previously treated for sinusitis. Which of the following is the most likely diagnosis?
A. Aseptic meningitis
B. Bacterial meningitis
C. Fungal meningitis
D. Nonpurulent meningitis

20. Most causes of encephalitis are:
A. bacterial.
B. viral.
C. fungal.
D. toxoid.

21. A 23-year-old female begins having problems with tiredness, weakness, and visual changes. Her diagnosis is multiple sclerosis (MS). The pathogenic model of multiple sclerosis includes:
A. depletion of dopamine in the central nervous system.
B. demyelination of nerve fibers in the CNS.
C. the development of neurofibril webs in the CNS.
D. reduced amounts of acetylcholine at the neuromuscular junction.

22. Classic amyotrophic lateral sclerosis (ALS) presents with:
A. progressive dementia.
B. muscle weakness and atrophy.
C. severe paresthesias.
D. autonomic dysfunction.

23. Regulation of body temperature primarily occurs in the:
A. cerebrum.
B. brain stem.
C. hypothalamus.
D. pituitary gland.
24. Hikers are attempting to cross the Arizona deserts with a small supply of water. The temperatures cause them to sweat profusely and become dehydrated. This condition is referred to as:
   A. heat cramping.
   B. heat exhaustion.
   C. heat stroke.
   D. malignant hyperthermia.

25. Characteristics of heat stroke include:
   A. mild elevation of core body temperatures.
   B. cerebral edema and degeneration of the CNS.
   C. spasmodic cramping in the abdomen and extremities.
   D. alterations in calcium uptake.

26. Which disease is associated with increased intraocular pressures?
   A. Glaucoma
   B. Ocular degeneration
   C. Diplopia
   D. Astigmatism

27. Which one would likely cause vertigo:
   A. conductive hearing loss.
   B. tooth ache.
   C. presbycusis.
   D. Ménière disease.

28. A 70-year-old male presents to his physician complaining of loss of vision. He reports that he has hypertension and smokes cigarettes. Which of the following disorders is most likely causing his visual loss?
   A. Presbyopia
   B. Macular degeneration
   C. Strabismus
   D. Amblyopia

29. When thought content and arousal level are intact but a patient cannot communicate, the patient has:
   A. cerebral death.
   B. locked-in syndrome.
   C. dysphagia.
   D. cerebellar motor syndrome.
30. A 10-year-old female was brought to the ER following a sudden onset of convulsions. The physicians think that she experienced an explosive, disorderly discharge of cerebral neurons referred to as:
A. reflex.
B. seizure.
C. inattentiveness.
D. brain death.

31. A 20-year-old male was at the supermarket when he fell to the ground. Bystanders reported that he lost consciousness and his body tensed up then relaxed, then tensed and relaxed several times. He most likely was experiencing a(n):
A. partial seizure.
B. absence seizure.
C. myoclonic seizure.
D. tonic-clonic seizure.

32. The cognitive disorder that results in the loss of memory of events that occurred before a head injury is:
A. selective memory deficit.
B. anterograde amnesia.
C. retrograde amnesia.
D. executive memory deficit.

33. A 65-year-old male recently suffered a cerebral vascular accident. He is now unable to recognize and identify objects by touch because of injury to the sensory cortex. This condition is a form of:
A. hypomimesis.
B. agnosia.
C. dysphasia.
D. agraphia.

34. An alcoholic checked into a rehabilitation center. He experiences delirium, inability to concentrate, and is easily distracted. From which of the following is he most likely suffering?
A. Acute confusional state
B. Echolalia
C. Dementia
D. Dysphagia

35. Dementia is manifested by:
A. violent behavior.
B. hyperactivity.
C. depression.
D. loss of recent and remote memory.
36. A direct consequence of increased intracranial pressure is:
A. brain tissue hypoxia.
B. intracranial hypotension.
C. ventricular swelling.
D. expansion of the cranial vault

37. Cerebral edema is an accumulation of fluid in the:
A. brain ventricles.
B. brain tissue.
C. subarachnoid space.
D. neuroglia.

38. A 51-year-old male is admitted to the neuro critical care unit with a severe closed head injury. All four extremities are in rigid extension, his forearm is hyperpronated, and his legs are in plantar extension. This condition is known as:
A. decorticate posturing.
B. decerebrate posturing.
C. caloric posturing.
D. excitation posturing.

39. A disorder that causes excessive movement is:
A. tachykinesia.
B. akinesia.
C. hyperkinesia.
D. dyskinesia.

40. Spinal shock is characterized by:
A. loss of voluntary motor function with preservation of reflexes.
B. cessation of spinal cord function below the lesion.
C. loss of spinal cord function at the level of the lesion only.
D. temporary loss of spinal cord function above the lesion.

41. A 40-year-old female complains of abnormal movement and progressive dysfunction of intellectual and thought processes. She is experiencing movement problems that begin in the face and arms and eventually affect the entire body and her boss is a mean doctor. The most likely diagnosis is:
A. tardive dyskinesia.
B. Huntington disease.
C. hypokinesia.
D. Alzheimer disease.
42. A 54-year-old patient with pulmonary tuberculosis (lung infection) is evaluated for syndrome of inappropriate ADH secretion (SIADH). Which of the following clinical manifestations would be expected in this patient?
A. Peripheral edema
B. Tachycardia
C. Low blood pressure
D. Concentrated urine

43. A 50-year-old male patient presents with polyuria and extreme thirst. He was given exogenous ADH. For which of the following would this treatment be effective?
A. Neurogenic diabetes insipidus
B. Psychogenic diabetes insipidus
C. Nephrogenic diabetes insipidus
D. SIADH

44. A 15-year-old female presents with breast discharge, dysmenorrhea, and excessive excitability. Tests reveal that all her pituitary hormones are elevated. The most likely cause is:
A. a pituitary adenoma.
B. hypothalamic hypossecretion.
C. hypothalamic inflammation.
D. a neurohypophyseal tumor.

45. Common neurologic disturbances seen with pituitary adenomas are:
A. comas.
B. visual disturbances.
C. confusional states.
D. breathing abnormalities.

46. A 35-year-old female with Graves disease is admitted to a medical-surgical unit. Lab tests would most likely reveal:
A. high levels of circulating thyroid-stimulating antibodies.
B. ectopic secretion of thyroid-stimulating hormone (TSH).
C. low circulating levels of thyroid hormones.
D. stimulation of thyroid-binding globulin.

47. A 3-year-old male was diagnosed with congenital hypothyroidism (cretinism). If left untreated, the child would have:
A. mental retardation and stunted growth.
B. increased risk of childhood thyroid cancer.
C. hyperactivity and attention deficit disorder.
D. liver, kidney, and pancreas failure.
48. A problem associated with chronic hyperparathyroidism is:
   A. seizure disorder.
   B. vitamin D malabsorption.
   C. hyponatremia.
   D. osteoporosis and pathologic fractures.

49. A 12-year-old female is newly diagnosed with type 1 diabetes mellitus (DM). Which of the following is the most likely cause of her disease?
   A. A familial, autosomal dominant gene defect
   B. Obesity and lack of exercise
   C. Immune destruction of the pancreas
   D. Hyperglycemia from eating too many sweets

50. Management of diabetes mellitus involves measuring glycosylated hemoglobin (hemoglobin A1c) levels. The purpose of this test is to:
   A. measure fasting glucose levels.
   B. monitor long-term serum glucose control.
   C. detect acute complications of diabetes.
   D. check for hyperlipidemia.

51. Hyperglycemia in type 2 diabetes mellitus is a result of:
   A. insulin deficiency.
   B. hyperinsulinemia and insulin resistance.
   C. glucagon deficiency.
   D. liver dysfunction.

52. A 13-year-old male who uses insulin to control his type 1 diabetes experiences hunger, lightheadedness, tachycardia, pallor, headache, and confusion during gym class. The most probable cause of these symptoms is:
   A. hyperglycemia resulting from incorrect insulin administration.
   B. dawn phenomenon caused by eating a snack before gym class.
   C. hypoglycemia caused by increased exercise.
   D. Somogyi effect caused by insulin sensitivity.

53. Chronic complications of diabetes mellitus such as microvascular and macrovascular disease are primarily related to:
   A. pancreatic changes.
   B. hyperglycemia.
   C. ketone toxicity.
   D. hyperinsulinemia.
54. Both Cushing syndrome and Addison disease can manifest with elevated levels of:
A. ADH.  
B. cortisol.  
C. adrenocorticotropic hormone (ACTH).  
D. aldosterone.

55. Characteristic physical features of individuals with Cushing syndrome include:
A. weight loss and muscle wasting.  
B. truncal obesity and thin skin.  
C. pallor and swollen tongue.  
D. depigmented skin and eyelid lag.

56. The most common cause of Addison disease is:
A. an autoimmune reaction.  
B. dietary deficiency of sodium and potassium.  
C. cancer.  
D. viral infection of the pituitary gland.

57. The body’s inability to conserve water and sodium when affected by Addison disease is explained by which of the following conditions?
A. Low levels of cortisol 
B. High levels of ACTH  
C. Hypersecretion of ADH  
D. Aldosterone deficiency

58. A student is driving to school when another driver nearly hits her. Her heart begins beating harder and faster as she becomes aroused and scared. Which of the following stages of the general adaptation syndrome is she experiencing?
A. Alarm stage  
B. Stage of resistance  
C. Adaptation  
D. Exhaustion

59. Stress-induced stimulation of the adrenal cortex causes it to secrete:
A. estrogen.  
B. cortisol.  
C. parathyroid hormone.  
D. adrenocorticotropic hormone (ACTH).

60. Effects of elevated b-endorphins include:
A. peripheral vasoconstriction.  
B. hyperglycemia.  
C. pain inhibition.  
D. decreased immune cell activity.
61. **True or False** the impact of stress on appetite depends on the type of stress and each person's genes

62. **True or False** the sympathetic response precedes the activation of the HPA axis following a stressor

63. In the vast majority of cases of delayed puberty, the problem is:
   A. a disruption in the hypothalamus.
   B. a disruption of the pituitary.
   C. slow maturation.
   D. decreased hormone levels.

64. A 6-year-old female is showing growth of pubic hair. All other physical characteristics appear normal. The correct diagnosis would be:
   A. delayed puberty.
   B. incomplete precocious puberty.
   C. heterosexual precocious puberty.
   D. normal puberty.

65. An 18-year-old female is diagnosed with dysmenorrhea. Which of the following symptoms will she most likely experience?
   A. Absence of menstruation
   B. Painful menstruation
   C. Unusually long menstrual period
   D. Menstrual irregularity

66. A 20-year-old female presents with pelvic and back pain severe enough to miss work. She reports that the pain occurs with the onset of menses. Physical examination fails to find pelvic pathology. The most likely cause of her condition is:
   A. lack of estrogen.
   B. stress.
   C. elevated prostaglandins.
   D. poor nutrition.

67. A 20-year-old female presents with irregular and heavy bleeding, passage of large clots, and anemia. She is most likely experiencing:
   A. premenstrual syndrome.
   B. dysfunctional uterine bleeding.
   C. polycystic ovarian syndrome.
   D. primary dysmenorrhea.
68. A 25-year-old female presents with amenorrhea and hirsutism. She is diagnosed with polycystic ovarian syndrome. Lab testing will most likely reveal:
   A. estrogen deficit.
   B. genetic cancerous mutations.
   C. cortisol excess.
   D. hyperinsulinemia.

69. An important risk factor in the development of benign prostatic hypertrophy (BPH) is:
   A. recurrent prostatitis.
   B. a diet high in fat.
   C. cigarette smoking.
   D. increased age.

70. Prostate cancer:
   A. is responsible for a majority of cancer-related deaths in males.
   B. usually occurs before age 50.
   C. is the leading type of cancer in men in the United States.
   D. is more common in Caucasian men in the United States.

EXTRA CREDIT

71. TRUE or FALSE In endometriosis, cells from the lining of the uterus proliferate outside the uterine cavity

72. TRUE or FALSE Impotence can be caused by nerve damage in the lower back