Week 8: Final Exam

- **Due** Dec 16 at 11:59pm
- **Points** 150
- **Questions** 75
- **Available** Dec 10 at 12am - Dec 16 at 11:59pm 7 days
- **Time Limit** 90 Minutes

Instructions

- The Week 8 final exam counts toward the final grade. It is comprehensive and covers material from Weeks 1–8.
- The final exam consists of 75 questions and is worth 2 points each.
- You have one attempt to take the exam with a 90 minute time limit.

Good luck!

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	75 minutes	146 out of 150

Score for this quiz: **146** out of 150

Submitted Dec 16 at 11:15pm
This attempt took 75 minutes.

Question 1
2 / 2 pts

What period follows depolarization of the myocardium and represents a period during which no new cardiac potential can be propagated?

- (•) Refractory
- ( ) Threshold
- ( ) Sinoatrial (SA)
- ( ) Hyperpolarization

During the refractory period, no new cardiac action potential can be initiated by a stimulus. This selection is the only option that accurately identifies the period described in the question.

Question 2
2 / 2 pts

What is the suggested mean blood pressure for an 8- to 9-year-old child?

- (•) 106/58 mm Hg
- ( ) 104/55 mm Hg

112/62 mm Hg

121/70 mm Hg

The suggested mean blood pressure for an 8- to 9- year-old child is 106/58 mm Hg. For a child of 6 to 7 years old, 104/55 mm Hg is appropriate; for a 12- to 13-year-old child, 112/62 mm Hg is appropriate, and for a 16- to 18-year-old young man, 121/70 mm Hg is appropriate.

Question 3
2 / 2 pts

Which is an example of an endogenous antigen?

Yeast

Cancer cells

Fungus

Bacteria

Of the options provided, endogenous antigens include only those uniquely produced by cancerous cells.

Question 4
2 / 2 pts

An infant has a crescendo-decrescendo systolic ejection murmur located between the second and third intercostal spaces along the left sternal border. A wide fixed splitting of

the second heart sound is also found. These clinical findings are consistent with which congenital heart defect?

Atrioventricular canal (AVC) defect

Patent ductus arteriosus (PDA)

Ventricular septal defect (VSD)

Atrial septal defect (ASD)

Because most children with ASD are asymptomatic, diagnosis is usually made during a routine physical examination by the auscultation of a crescendo-decrescendo systolic ejection murmur that reflects increased blood flow through the pulmonary valve. The location of the murmur is between the second and third intercostal spaces along the left sternal border. A wide fixed splitting of the second heart sound is also characteristic of ASD, reflecting volume overload to the right ventricle and causing prolonged ejection time and a delay of pulmonic valve closure. The presentations of other congenital heart defects are not consistent with the described symptoms.

Question 5

2 / 2 pts

Chvostek and Trousseau signs indicate which electrolyte imbalance?

Hypocalcemia

Hypercalcemia

Hyperkalemia

Hypokalemia

Two clinical signs of hypocalcemia are the Chvostek sign and Trousseau sign. These clinical signs are not indicative of any of the other options.

Question 6
2 / 2 pts

How does chest wall compliance in an infant differ from that of an adult?

An adult’s chest wall compliance is the same as an infant’s.

An adult’s chest wall compliance is dissimilar to that of an infant’s.

An adult’s chest wall compliance is lower than an infant’s.

An adult’s chest wall compliance is higher than an infant’s.

Chest wall compliance is higher in infants than it is in adults, particularly in premature infants.

Question 7
2 / 2 pts

What is the most commonly reported symptom of cancer treatment?

Hair loss

Nausea

Weight loss

Fatigue

Fatigue is the most frequently reported symptom of cancer and cancer treatment. Although patients report the other options, they are not as frequently experienced as fatigue.

Question 8

2 / 2 pts

At birth, which statement is *true*?

Gas exchange shifts from the placenta to the lung.

Systemic resistance and pulmonary resistance fall.

Systemic resistance and pulmonary resistance rise.

Systemic resistance falls and pulmonary resistance rises.

From the available options, the only change that takes place in the circulation at birth is the shift of gas exchange from the placenta to the lungs.

Question 9
0 / 2 pts

What is the treatment of choice for pernicious anemia (PA)?

Correct Answer

Vitamin B_{12} by injection

Cyanocobalamin by oral intake

Folate by oral intake

Ferrous fumarate by Z-track injection

Replacement of vitamin B_{12} (cobalamin) is the treatment of choice for PA. Initial injections of vitamin B_{12} are administered weekly until the deficiency is corrected, followed by monthly injections for the remainder of the individual's life. The other options are not treatments for PA.

Question 10
2 / 2 pts

Which disease is an example of a rickettsial infection?

Cholera

Rocky Mountain spotted fever

Sleeping sickness

Candida

Rocky Mountain spotted fever is a result of a rickettsiae. Cholera is a bacterial infection, candida is a fungal infection, and sleeping sickness is a protozoal infection.

Question 11
2 / 2 pts

Which statement is *true* regarding maternal antibodies provided to the neonate?

The antibodies enter into the fetal circulation by means of active transport.

The antibodies are transferred to the fetus via the lymphatic system.

The antibodies reach protective levels after approximately 6 months of age.

The antibodies are directly related to the mother's nutritional intake.

To protect the child against infectious agents both in utero and during the first few postnatal months, a system of active transport facilitates the passage of maternal antibodies into the fetal circulation. The antibodies are transmitted via the placenta and are related to the mother's immune system. The infant's own IgG-related antibodies reach protective levels by 6 months of age.

Question 12
2 / 2 pts

Which statement is *true* regarding pain and cancer?

Pain is primarily a result of pressure caused by the tumor.

Pain is generally associated with late-stage cancer.

Pain indicates the metastasis of a cancer.

Pain is usually the initial symptom of cancer.

Pain is generally associated with the late stages of cancer. Pressure, obstruction, invasion of a structure sensitive to pain, stretching, tissue destruction, and inflammation can cause pain. Pain is not the initial symptom of cancer nor does it indication that the cancer has metastasized.

Question 13
2 / 2 pts

During an infection, why do lymph nodes enlarge and become tender?

The nodes fill with purulent exudate.

B lymphocytes proliferate.

The nodes are not properly functioning.

The nodes are inflamed.

The B lymphocyte proliferation in response to significant antigen (e.g., during infection) may result in lymph node enlargement and tenderness (reactive lymph node). This description is not accurate for the other options.

Question 14
2 / 2 pts

What is a significant cause of morbidity and mortality worldwide?

Starvation

Cardiovascular disease

Infectious disease

Traumatic injury

Despite the wide-scale implementation of progressive public health and immunization policies, infectious disease remains a significant cause of morbidity and mortality. The other options are not significant causes.

Question 15
2 / 2 pts

Which renal change is found in older adults?

Sharp decline in glomerular filtration rate

Decrease in urine output

Sharp decline in renal blood flow

Decrease in the number of nephrons

With aging, the number of nephrons decreases. The other options are not necessarily related to aging.

Question 16
2 / 2 pts

After sexual transmission of HIV, a person can be infected yet seronegative for how many months?

24 to 36

18 to 20

6 to 14

1 to 2

Antibody appears rather rapidly after infection through blood products, usually within 4 to 7 weeks. After sexual transmission, however, the individual can be infected yet seronegative for 6 to 14 months or, in at least one case, for years.

Question 17
2 / 2 pts

Which organism is responsible for the development of syphilis?

Neisseria syphilis

Treponema pallidum

Chlamydia trachomatis

Haemophilus ducreyi

T. pallidum is the only cause of syphilis.

Question 18
2 / 2 pts

The common hay fever allergy is expressed through a reaction that is mediated by which class of immunoglobulins?

IgE

IgG

T cells

IgM

Type I reactions are mediated by antigen-specific IgE and the products of tissue mast cells (see Figure 9-1). The most common allergies (e.g., pollen allergies) are type I reactions. In addition, most type I reactions occur against environmental antigens and are therefore allergic. The other options do not accurately identify the mediation factor related to hay fever.

Question 19
2 / 2 pts

Blood cells that differentiate into macrophages are known as:

Neutrophils

Basophils

Eosinophils

Monocytes

Only monocytes migrate into a variety of tissues and fully mature into tissue **macrophages** and myeloid **dendritic cells** (see Table 27-3).

Question 20

2 / 2 pts

In which structure does B lymphocytes mature and undergo changes that commit them to becoming B cells?

Spleen

Regional lymph nodes

Thymus gland

Bone marrow

B lymphocytes mature and become B cells in specialized (primary) lymphoid organs—the thymus gland for T cells and the bone marrow for B cells. Neither regional lymph nodes nor the spleen are involved in changing B lymphocytes into B cells.

Question 21
2 / 2 pts

Hemophilia B is caused by a deficiency of which clotting factor?

V

IX

X

VIII

Only factor IX deficiency causes hemophilia B (Christmas disease).

Question 22
2 / 2 pts

Which of the following causes condylomata acuminata or genital warts?

Human papillomavirus (HPV)

Herpes simplex virus 1 (HSV-1)

Chlamydia

Adenovirus

Genital warts are quite contagious and are a result of only HPV.

Question 23
2 / 2 pts

Exhaustion occurs if stress continues when which stage of the general adaptation syndrome is *not* successful?

Alarm

Adaptation

Flight or fight

Arousal

Exhaustion occurs if stress continues and adaptation is not successful, ultimately causing impairment of the immune response, heart failure, and kidney failure, leading to death. The other stages occur before the adaptation stage.

Question 24
2 / 2 pts

Which chamber of the heart endures the highest pressures?

Left ventricle

Left atrium

Right ventricle

Right atrium

Pressure is greatest in the systemic circulation, driven by the left ventricle.

Question 25
2 / 2 pts

Which glycoprotein protects against urolithiasis and is a ligand for lymphokines?

Uromodulin

Urodilatin

Cystatin

Nephrin

Tamm-Horsfall glycoprotein, also known as uromodulin, is the most abundant urinary protein, protects against bacterial adhesion and urolithiasis, and is a ligand for lymphokines. This statement is not true of the other options.

Question 26
2 / 2 pts

Having ejected a mature ovum, the ovarian follicle develops into a(n):

Functional scar

Thecal follicle

Atretic follicle

Corpus luteum

Having ejected a mature ovum, the only resulting structure is the corpus luteum.

Question 27
2 / 2 pts

The most critical aspect in correctly diagnosing a seizure disorder and establishing its cause is:

Health history

Computed tomographic (CT) scan

Skull x-ray studies

Cerebrospinal fluid analysis

Although the history may be supplemented with the remaining options, it remains the pivotal tool for establishing the cause of a seizure disorder.

Question 28
2 / 2 pts

Which serum laboratory test is elevated in all forms of osteogenesis imperfecta?

Alkaline phosphatase

Calcium

Total protein

Phosphorus

Of the available options, serum alkaline phosphatase is elevated in all forms of the disease.

Question 29
2 / 2 pts

How does the release (increase) of epinephrine raise body temperature?

It increases and strengthens the heart rate.

The release of epinephrine causes shivering.

It raises the metabolic rate.

It affects muscle tone.

Epinephrine and norepinephrine produce a rapid transient increase in heat production by raising the body's basal metabolic rate. The other options are not correct descriptions of the effects of epinephrine on body heat.

Question 30

2 / 2 pts

Clinical manifestations that include irregular or heavy bleeding, the passage of large clots, and the depletion of iron stores support which diagnosis?

Premenstrual syndrome

Dysfunctional uterine bleeding

Primary dysmenorrhea

Polycystic ovary syndrome

Unpredictable and variable bleeding, in terms of amount and duration, characterize dysfunctional uterine bleeding. Especially during perimenopause, dysfunctional bleeding also may involve flooding and the passage of large clots, which often indicate excessive blood loss. Excessive bleeding can lead to iron-deficiency anemia. This option is the only answer that demonstrates the clinical manifestations described.

Question 31
2 / 2 pts

What happens to the vagina’s lining at puberty?

It becomes thinner.

It becomes thicker.

It assumes a neutral pH.

It undergoes atrophy.

Before puberty, vaginal pH is approximately 7 (neutral) and the vaginal epithelium is thin. At puberty, the pH becomes more acidic (4 to 5) and the squamous epithelial lining thickens. Cell atrophy is not associated with puberty.

Question 32
2 / 2 pts

Why is prolonged diarrhea more severe in children than it is in adults?

Children have diarrhea more often than adults.

Less water is absorbed from the colon in children.

Fluid reserves are smaller in children.

Children have a higher fluid volume intake.

Infants have low fluid reserves and relatively rapid peristalsis and metabolism. Therefore the danger of dehydration is great. This selection is the only option that correctly identifies the reason prolonged diarrhea is more severe in children.

Question 33

2 / 2 pts

The two most important risk factors for type 2 diabetes are:

Autoantibodies and human leukocyte antigen associations

HLA associations and positive family history

Autoantibodies and obesity

Obesity and positive family history

The two most important risk factors for type 2 diabetes are positive family history and obesity. The other options are not believed to be important risk factors for this form of diabetes.

Question 34

2 / 2 pts

What is the leading cause of infertility in women?

Polycystic ovary syndrome

Endometriosis

Pelvic inflammatory disease

Salpingitis

Polycystic ovary syndrome remains one of the most common endocrine disturbances affecting women, especially young women, and is a leading cause of infertility in the United States.

Question 35

2 / 2 pts

Adoption studies have shown that the offspring of an alcoholic parent when raised by nonalcoholic parents have what amount of an increased risk of developing alcoholism?

Tenfold

Fourfold

Threefold

Twofold

Adoption studies have shown that the offspring of an alcoholic parent, even when raised by nonalcoholic parents, have a fourfold increased risk of developing the disorder.

Question 36
2 / 2 pts

Which structure attaches skeletal muscle to bone?

Ligament

Tendon

Bursa

Mesentery

A tendon is fibrous connective tissue that attaches skeletal muscle to bone. None of the other options are associated with this function.

Question 37
2 / 2 pts

Which term is used to describe an intestinal obstruction caused by the invagination of the ileum into the cecum and part of the ascending colon by collapsing through the ileocecal valve?

Volvulus

Intussusception

Congenital aganglionic megacolon

Malrotation

Intussusception is the telescoping or invagination of one portion of the intestine into another section of intestine. Usually, the ileum invaginates the cecum and part of the ascending colon by collapsing through the ileocecal valve. The other terms are not used to describe this event.

Question 38
2 / 2 pts

The tear in a ligament is referred to as a:

Disunion

Fracture

Sprain

Strain

Ligament tears are commonly known as *sprains*. None of the other options are associated with this damage.

Question 39
2 / 2 pts

Which dyskinesia involves involuntary movements of the face, trunk, and extremities?

Hyperkinesia

Paroxysmal

Tardive

Cardive

Tardive dyskinesia is the involuntary movement of the face, trunk, and extremities. The other terms do not describe involuntary movements of the face, trunk, and extremities.

Question 40

2 / 2 pts

Which of the following is a lipid-soluble hormone?

Growth hormone

Oxytocin

Epinephrine

Cortisol

Cortisol and adrenal androgens are lipid-soluble hormones and are primarily bound to a carrier or transport protein in circulation. The other options are water-soluble hormones.

Question 41

2 / 2 pts

It is *true* that myasthenia gravis:

Is an acute autoimmune disease.

Causes muscle weakness.

May result in adrenergic crisis.

Affects the nerve roots.

Exertional fatigue and weakness that worsens with activity, improves with rest, and recurs with resumption of activity characterizes myasthenia gravis. None of the other options are true of myasthenia gravis.

Question 42

2 / 2 pts

What effect does hyperphosphatemia have on other electrolytes?

Increases serum magnesium.

Decreases serum calcium.

Increases serum calcium.

Decreases serum magnesium.

Hyperphosphatemia leads to hypocalcemia; the other options are incorrect.

Question 43
2 / 2 pts

An amniocentesis indicates a neural tube defect when an increase in which protein is evident?

Embryonic

Chorionic

Alpha fetoprotein

Amniotic

Other disorders can be detected with this procedure. These include most neural tube defects, which cause an elevation of alpha fetoprotein in the amniotic fluid, and hundreds of diseases caused by mutations of single genes. The correct option is the only one that accurately identifies the protein responsible for a neural tube defect.

Question 44
2 / 2 pts

Which pancreatic enzyme is responsible for the breakdown of carbohydrates?

Chymotrypsin

Trypsin

Amylase

Lipase

Salivary and pancreatic amylases break down starches to oligosaccharides by splitting α-1,4-glucosidic linkages of long-chain molecules. None of the other options is relevant to this process.

Question 45
2 / 2 pts

What part of the brain provides the emotional response to pain?

Hypothalamus

Thalamus

Limbic system

Parietal lobe

The limbic and reticular tracts are involved in alerting the body to danger, initiating arousal of the organism, and emotionally processing the perceived afferent signals, not just as stimuli, but also as pain. The remaining options do not fulfill this objective.

Question 46
2 / 2 pts

Which type of ion directly controls the contraction of muscles?

- (•) Calcium
- ( ) Magnesium
- ( ) Potassium
- ( ) Sodium

Contraction begins as the calcium ions combine with troponin, a reaction that overcomes the inhibitory function of the troponin-tropomyosin system. This selection is the only option that has such a direct association with muscle contraction.

Question 47
2 / 2 pts

The secretion of adrenocorticotropic-stimulating hormone (ACTH) will result in the increased level of which hormone?

- (•) Cortisol.
- ( ) Insulin
- ( ) Thyroxine

Antidiuretic hormone

Psychologic and physiologic stress (e.g., hypoxia, hypoglycemia, hyperthermia, exercise) increases ACTH secretion, leading to increased cortisol levels. Only cortisol describes the appropriate feedback loop.

Question 48

2 / 2 pts

In 95% of children of delayed puberty, the problem is caused by:

Disruption of the pituitary

Physiologic hormonal delays

Deficit in estrogen or testosterone

Disruption in the hypothalamus

In 95% of children with delayed puberty, the delay is physiologic; that is, hormonal levels are normal and the hypothalamic-pituitary-gonadal (HPG) axis is intact, but maturation is slowly happening. This option is the only answer that accurately describes the most common cause of delayed puberty.

Question 49

2 / 2 pts

Bacteria gain access to the female urinary tract by which means?

Systemic blood that is filtered through the kidney

Bacteria ascending the urethra into the bladder

Bacteria traveling from the lymph adjacent to the bladder and kidneys

Colonization of the bladder when urine is static

Urinary tract infections (UTIs) in girls occur as a result of perineal bacteria, especially *Escherichia coli*, ascending the urethra. None of the other options represent the means by which bacteria gain access to the female urinary tract.

Question 50
2 / 2 pts

Neurofibrillary tangles characterize which neurologic disorder?

Dementia syndrome

Delirium

Alzheimer disease

Parkinson disease

Amyloid plaques, neurofibrillary tangles, as well as neuronal and synaptic losses in the brain, characterize Alzheimer disease.

Question 51
2 / 2 pts

Which change is a result of puberty and defends the vagina from infection?

Estrogen levels are low.

The pH stabilizes between 7 and 8.

Vaginal pH becomes more acidic.

A thin squamous epithelial lining develops.

At puberty, the pH becomes more acidic (4 to 5) and the squamous epithelial lining thickens. These changes are maintained until menopause (cessation of menstruation), at which time the pH rises again to more alkaline levels and the epithelium thins out. Therefore protection from infection is greatest during the years when a woman is most likely to be sexually active. Estrogen does not play a role in infection protection.

Question 52
2 / 2 pts

The data reporting that sickle cell disease affects approximately 1 in 600 American blacks is an example of which concept?

Incidence

Ratio

Risk

Prevalence

Prevalence rate is the proportion of the population affected by a disease at a specific point in time. Thus both the incidence rate and the length of the survival period in affected individuals determine prevalence. The incidence rate is the number of new cases of a disease reported during a specific period (typically 1 year), divided by the number of individuals in the population. A numerical expression representing a part of a larger whole or proportion is considered a ratio. Any factor that increases the chance of disease or injury is considered a risk.

Question 53

2 / 2 pts

Which clinical manifestations would be expected for a child who has complete trisomy of the twenty-first chromosome?

Widely spaced nipples, reduced carrying angle at the elbow, and sparse body hair

High-pitched voice, tall stature, gynecomastia, and an IQ of 60 to 90

Circumoral cyanosis, edema of the feet, short stature, and mental slowness

An IQ of 25 to 70, low nasal bridge, protruding tongue, and flat, low-set ears

Individuals with this disease are mentally retarded, with IQs usually ranging from 25 to 70. The facial appearance is distinctive and exhibits a low nasal bridge, epicanthal folds (which produce a superficially Asian appearance), protruding tongue, and flat, low-set ears. The correct option is the only one that accurately describes the clinical manifestations of the complete trisomy of the twenty-first chromosome.

Question 54

2 / 2 pts

Which assessment finding characterizes Osgood-Schlatter disease?

Tendinitis of the anterior patellar tendon

Bursitis of the subscapular bursa in the glenohumeral joint

Inflammation of the anterior cruciate ligament

Lateral epicondylitis of the elbow

Tendinitis of the anterior patellar tendon, within which the patella (kneecap) is embedded, and associated osteochondrosis of the tubercle of the tibia are characteristics of Osgood-Schlatter disease. This selection is the only option that is associated with Osgood-Schlatter disease.

Question 55

2 / 2 pts

Dilation of the ipsilateral pupil, following uncal herniation, is the result of pressure on which cranial nerve (CN)?

Abducens (CN VI)

Trochlear (CN IV)

Optic (CN I)

Oculomotor (CN III)

The oculomotor CN (III) is involved in this manifestation of pupil dilation. None of the other options would result in pupil dilation when subjected to pressure.

Question 56
2 / 2 pts

What directly causes ovulation during the menstrual cycle?

Gradual decrease in estrogen levels

Gradual increase in estrogen levels

Sudden increase of LH

Sharp rise in progesterone levels

Menstrual cyclicity and regular ovulation are dependent on (1) the activity of the gonadostat (GnRH pulse generator); (2) the pituitary secretion of gonadotropins; and (3) estrogen (estradiol)–positive feedback for the preovulatory LH and FSH surges, oocyte maturation, and corpus luteum formation.

Question 57
2 / 2 pts

Which clinical manifestations are associated with fibromyalgia?

Sensitivity at tender points and profound fatigue

Hot, tender, and edematous muscle groups bilaterally

Fasciculations of the upper and lower extremity muscles

Exercise intolerance and painful muscle cramps

Widespread joint and muscle pain, fatigue, and tender points are characteristics of fibromyalgia, a chronic musculoskeletal syndrome. Increased sensitivity to touch (i.e., tender points), the absence of systemic or localized inflammation, and fatigue and sleep disturbances are common. Fatigue is profound. The remaining options include symptoms not generally associated with fibromyalgia.

Question 58

2 / 2 pts

Which would be considered a positive symptom of schizophrenia?

Lack of social interaction

Blunted affect

Auditory hallucinations

Poverty of speech

Positive symptoms frequently occur during a ***psychotic episode***, when an individual loses touch with reality and experiences something that should be absent (e.g., hallucinations). The remaining options are classified as negative symptoms.

Question 59
2 / 2 pts

What anchors articular cartilage to the underlying bone?

- (•) Collagen fibers
- ( ) Elastin fibers
- ( ) Sharpey fibers
- ( ) Glycoproteins

Collagen fibers are important components of the cartilage matrix because they anchor the cartilage securely to underlying bone. This statement is not true of the other options.

Question 60
2 / 2 pts

At 2 or 3 weeks of age, an infant who has been well fed and has gained weight begins to vomit for no apparent reason. The vomiting gradually becomes more forceful. These symptoms may be indicative of which disorder?

- (•) Pyloric stenosis
- ( ) Galactosemia
- ( ) Congenital aganglionic megacolon

Esophageal atresia

Of the options available, only the clinical manifestations of pyloric stenosis—an infant who has been well fed and has gained weight begins to vomit without an apparent reason—can appear between 2 and 3 weeks after birth. The vomiting gradually becomes more forceful.

Question 61
2 / 2 pts

Pinkeye is characterized by inflammation of which structure?

Sebaceous glands

Eyelids

Meibomian glands

Conjunctiva

Acute bacterial conjunctivitis (pinkeye) is an inflammation of the conjunctiva (mucous membrane covering the front part of the eyeball). The other structures are not affected by this inflammation.

Question 62
2 / 2 pts

The common property among the three types of medications used to treat depression is that they:

Decrease neurotransmitter levels in the postsynapse.

Increase neurotransmitter levels within the synapse.

Decrease neurotransmitter levels within the synapse.

Increase neurotransmitter levels in the presynapse.

All available antidepressants share the common property, albeit through different mechanisms, that increasing monoamine neurotransmitter levels within the synapse is the basis for their antidepressant effects. The processes by which antidepressants affect depression make the remaining options untrue.

Question 63

2 / 2 pts

What term is used to identify the calcium crystals that are associated with chronic gout?

Spurs

Stones

Nodes

Tophi

With time, crystal deposition in subcutaneous tissues causes the formation of small white nodules, or tophi, that are visible through the skin. Crystal aggregates deposited

in the kidneys can form urate renal stones and lead to renal failure. None of the other options are associated with the calcium crystals resulting from chronic gout.

Question 64
2 / 2 pts

The presence of a zygote having one chromosome with the normal complement of genes and one with a missing gene is characteristic of which genetic disorder?

- (•) Cri du chat
- ( ) Down syndrome
- ( ) Klinefelter syndrome
- ( ) Turner syndrome

This description is only accurate for Cri du chat syndrome.

Question 65
2 / 2 pts

Regarding type 2 diabetes, obesity is considered to be what type of risk?

- ( ) Relative
- (•) Modifiable
- ( )

Empirical

Genetic

Obesity is a modifiable risk factor for many diseases including heart disease, stroke, hypertension, and type 2 diabetes. The other terms do not apply.

Question 66
2 / 2 pts

Which hormone stimulates gonads to produce both male and female hormones?

Estrogen

Luteinizing hormone (LH)

Follicle-stimulating hormone (FSH)

Gonadotropin-releasing hormone (GnRH)

Extrahypothalamic factors cause the hypothalamus to secrete GnRH, which stimulates the anterior pituitary to secrete gonadotropins—FSH and LH. These hormones, in turn, stimulate the gonads (ovaries or testes) to secrete female or male sex hormones.

Question 67
2 / 2 pts

Which condition poses the highest risk for a cerebrovascular accident (CVA)?

Smoking

Hypertension

Polycythemia

Insulin-resistant diabetes mellitus

Hypertension is the single greatest risk factor for stroke. The other options are recognized risk factors but do not carry the intensity of hypertension.

Question 68

2 / 2 pts

When insulin binds its receptors on muscle cells, an increase in glucose uptake by the muscle cells is the result. This is an example of what type of effect by a hormone?

Synergistic

Direct

Permissive

Pharmacologic

Direct effects are the obvious changes in cell function that specifically result from the stimulation by a particular hormone. The other options are not used to identify the described effect.

Question 69
2 / 2 pts

Which four-step process correctly describes muscle contraction?

- (•) Excitation, coupling, contraction, relaxation
- ( ) Coupling, contraction, relaxation, excitation
- ( ) Relaxation, excitation, coupling, contraction
- ( ) Contraction, relaxation, excitation, coupling

Muscle contraction is a four-step process: excitation, coupling, contraction, and relaxation.

Question 70
2 / 2 pts

Alterations in which part of the brain are linked to hallucinations, delusions, and thought disorders associated with schizophrenia?

- ( ) Hypothalamus
- ( ) Limbic system
- (•) Temporal lobe

Parietal lobe

.
Only temporal lobe alterations may be responsible for the production of positive schizophrenic symptoms, such as hallucinations, delusions, thought disorders, and bizarre behavior.

Question 71
0 / 2 pts

Which person is at the greatest risk for developing delirium?

A depressed Hispanic woman

A man diagnosed with schizophrenia

An individual with diabetes celebrating a 70th birthday

Correct Answer

An individual on the second day after hip replacement

Delirium is associated with autonomic nervous system overactivity and typically develops in 2 to 3 days, most commonly in critical care units, postsurgically, or during withdrawal from CNS depressants (e.g., alcohol, narcotic agents). Age, gender, and chronic illnesses are not generally associated with delirium triggers.

Question 72
2 / 2 pts

Aldosterone directly increases the reabsorption of:

Calcium

Water

Sodium

Magnesium

In the kidney, aldosterone primarily acts on the epithelial cells of the nephron-collecting duct to increase sodium ion reabsorption. This action cannot be said of the other options.

Question 73

2 / 2 pts

What term is used to identify the condition that exists when the urethral meatus is located on the undersurface of the penis?

Hyperspadias

Hypospadias

Chordee

Epispadias

Hypospadias is a congenital condition in which the urethral meatus is located on the ventral side or undersurface of the penis. This is the only term used for this condition.

Question 74

2 / 2 pts

Considering the mediating factors of premenstrual syndrome (PMS), which medication may be used either continually or only during the menstrual period as a treatment for the condition?

SSRIs

Estrogen

NSAIDs

Progesterone

A selective serotonin reuptake inhibitors (SSRI) (an antidepressant) relieves symptoms in approximately 60% to 90% of women and may be continually administered or only prescribed during the premenstrual period. Oral contraceptive pills that contain estrogen and progesterone also can be continuously used for up to 3 months to decrease the frequency of menstrual periods, PMS, and premenstrual dysphoric disorder (PMDD). Nonsteriodal antiinflammatory drugs (NSAIDs) would not be continually administered.

Question 75

2 / 2 pts

A criterion for a diagnosis of generalized anxiety disorder (GAD) is a period of excessive worrying that lasts for at least how many months?

12

3

9

6

GAD is diagnosed when an individual spends at least 6 months worrying excessively and exhibits at least three of the six symptoms. Although 3 months is not sufficient time, the remaining options are excessive.