

## UNIT 1: LEVELS OF ORGANIZATION

- The word "anatomy" comes from a Greek root word that means:  
A structure                      B to cut apart                      C body                      D life
- Human physiology is the study of the ——— of body structures and the ways in how they work together to support life functions.  
A systemic anatomy                      B complexity                      C chemistry and physics                      D uniqueness
- is the process by which larger more complex substances are broken down into smaller, simpler molecules.  
A Anabolism                      B Metabolism                      C Calcinosiis                      D Catabolism
- Negative feedback systems have three basic components, including a sensor, control center and a/an:  
A site monitor                      B effector                      C regulator                      D pressure point
- The ——— is the serous membrane that surrounds the several organs in the abdominopelvic cavity.  
A pericardium                      B peritoneum                      C pleura                      D hypochondriac region
- A PET scan is a medical imaging technique in which radiopharmaceuticals are traced to reveal ——— and physiological functions in tissues.  
A metabolic                      B hematologic                      C hormonal                      D reproductive
- An electron has about ——— the mass of a proton or neutron.  
A 1/500th                      B 1/1000th                      C 1/2000th                      D 1/3000th
- is an essential component of life because it is able to break the ionic bonds in salts to free the ions.  
A Carbon                      B Water                      C Hydrogen                      D Oxygen
- An enzyme is a catalyst composed of protein or ——— acid.  
A sulfuric                      B perchloric                      C ribonucleic                      D hydrochloric
- Carbohydrates are referred to as:  
A galactose                      B saccharides                      C triglycerides                      D fructose
- Prostaglandins are derived from:  
A proteins                      B unsaturated fatty acids                      C cholesterol                      D steroids
- Synthesis reaction is a type of anabolic reaction where two or more atoms or molecules bond, resulting in formation of a larger molecule.  
A True                      B False
- is the movement of particles from an area of high concentration to an area of lower concentration.  
A Passive transport                      B Diffusion                      C Active transport                      D Facilitated diffusion
- , the jelly-like substance within the cell, provides the fluid medium necessary for biochemical reactions.  
A Cytoplasm                      B Lumen                      C Cytosol                      D Extracellular fluid
- Within the nucleus are threads of ——— composed of DNA and associated proteins.  
A chromosomes                      B nucleosomes                      C histones                      D chromatin
- Translation is the process of synthesizing a chain of amino acids called a(n):  
A RNA strand                      B codon                      C anticodon                      D polypeptide

17. At the ——— checkpoint, the cell must be ready for DNA synthesis to occur.  
 A  $G_0$                                       B  $G_1$                                       C  $G_2$                                       D  $G_3$
18. The process of ——— involves the differentiation of multipotent cells into blood and immune cells.  
 A hematopoiesis                              B splicing                                      C phagocytosis                              D autolysis
19. The first embryonic cells generated have the ability to differentiate into any type of cell in the body and, as such, are called:  
 A unipotent                                      B pluripotent                                      C totipotent                                      D multipotent
20. The endothelium is the epithelial tissue that lines vessels of the lymphatic and cardiovascular system.  
 A True                                      B False
21. ——— secretion accumulates near the apical portion of the cell.  
 A Endocrine                                      B Merocrine                                      C Holocrine                                      D Apocrine
22. ——— is the most common type of cartilage in the body.  
 A Fibrocartilage                                      B Hyaline                                      C Elastic                                      D Collagen
23. A long "tail," the axon, extends from the body of a neuron and can be wrapped in an insulating layer known as:  
 A fluid connective tissue                                      B endothelium                                      C myelin                                      D Schwann cells
24. ———, regions of the chromosomes necessary for cell division, shorten each time cells divide.  
 A Telomerase                                      B Centrosomes                                      C Centromeres                                      D Telomeres

## UNIT 2: SUPPORT AND MOVEMENT

25. The epidermis is composed of keratinized, stratified squamous epithelium. It is made up of four or five layers of:  
 A epithelial cells                                      B stem cells                                      C blood cells                                      D nerve cells
26. The ——— is well vascularized and has a rich sensory and sympathetic nerve supply.  
 A hypodermis                                      B papillary layer                                      C elastin fiber                                      D reticular layer
27. The ——— ends deep in the dermis at the hair bulb.  
 A hair matrix                                      B hair root                                      C hair follicle                                      D hair papilla
28. A(n) ——— is a type of oil gland that is found all over the body and helps lubricate and waterproof the skin and hair.  
 A eccrine gland                                      B apocrine gland                                      C sebaceous gland                                      D merocrine gland
29. A third-degree burn extends into the epidermis and dermis, destroying the tissue and affecting the nerve endings and:  
 A sensory function                                      B underlying muscle                                      C bone                                      D stratum corneum
30. ——— is a hard, dense connective tissue that forms most of the adult skeleton, the support structure of the body.  
 A Cartilage                                      B Osseous tissue                                      C Epithelial tissue                                      D Mucous membrane
31. A projection is an area of a bone that projects above the surface of the bone.  
 A True                                      B False
32. Bone contains a relatively small number of cells entrenched in a matrix of ——— that provide a surface for salt crystals to adhere.  
 A elastin fibers                                      B reticular fibers                                      C elastic fibers                                      D collagen fibers
33. By the sixth or seventh week of embryonic life, the actual process of bone development, ——— begins.  
 A gastrulation                                      B neurulation                                      C ossification                                      D placentation

34. While bones are increasing in length, they are also increasing in diameter, a process called:
- A longitudinal growth      B appositional growth      C modeling      D remodeling
35. This type of fracture, called ———, occurs at an angle that is not 90 degrees.
- A oblique      B transverse      C greenstick      D comminuted
36. A ——— bone is a small, round bone embedded in a tendon that protects the tendon from compressive forces.
- A compact      B long      C short      D sesamoid
37. There are ——— bones in the appendicular skeleton of an adult.
- A 118      B 126      C 142      D 206
38. The ——— connects to the middle and inner ear cavities of the temporal bone.
- A styloid process      B carotid canal      C internal acoustic meatus      D external acoustic meatus
39. The coronal suture runs ——— across the skull.
- A from side to side      B downward      C upward      D high
40. The ——— sinus is located just above the eyebrows, within the frontal bone.
- A maxillary      B sphenoid      C frontal      D paranasal
41. Each paired ——— process projects laterally and arises from the junction point between the pedicle and lamina.
- A spinous      B transverse      C superior articular      D inferior articular
42. A costal groove is a shallow groove along the inferior margin of a rib that provides passage for blood vessels and a nerve.
- A True      B False
43. During the third week of embryonic development, a rod-like structure called the ——— develops dorsally along the length of the embryo.
- A fontanelle      B sclerotome      C somite      D notochord
44. The ——— of the radius is slightly curved and has a small ridge along its medial side.
- A neck      B shaft      C head      D ulnar notch
45. The ——— has two phalanges, a proximal phalanx, and a distal phalanx bone.
- A ulna      B interphalangeal joint      C pollex      D radius
46. The ——— is the kneecap and articulates with the distal femur.
- A patella      B tibia      C fibula      D tarsal bone
47. The base of the fifth metatarsal has a large, lateral expansion that provides for muscle attachments.
- A True      B False
48. The ——— is a posteroinferior portion of the hip bone.
- A interphalangeal joint      B humerus      C ischium      D lunate
49. The ——— lies on the posterior aspect of the shoulder.
- A clavicle      B scapula      C pectoral girdle      D axial skeleton
50. An immobile or nearly immobile joint is called a:
- A synovial joint      B synarthrosis      C cartilaginous joint      D fibrous joint
51. A cartilaginous joint where the bone are joined by fibrocartilage is called a:
- A symphysis      B gomphosis      C articular cartilage      D periodontal ligament

52. **Abduction and ——— motions occur within the coronal plane and involve medial-lateral motions of the limbs, fingers, toes, or thumb.**  
 A circumduction                      B pronation                      C adduction                      D supination
53. **Located between the articulating surfaces of the femur and tibia are two articular discs, the medial meniscus and:**  
 A medial epicondyle                      B medial tibia                      C fibula                      D lateral meniscus
54. **A type of fibrous joint in which the root of a tooth is anchored into its bony jaw socket by strong periodontal ligaments:**  
 A saddle joint                      B gomphosis                      C plane joint                      D acetabulum
55. **——— allows muscle tissue to pull on its attachment points and shorten with force.**  
 A Contractility                      B Elasticity                      C Extensibility                      D Excitability
56. **The motor neurons that tell the skeletal muscle fibers to contract originate in the:**  
 A cerebellum                      B brainstem                      C spinal cord                      D spinal fluid
57. **As long as ATP is available, it readily attaches to ——, the cross-bridge cycle can recur, and muscle contraction can continue.**  
 A tropomyosin                      B myosin                      C troponin                      D actin
58. **The absence of the low-level contractions that lead to muscle tone is referred to as hypotonia.**  
 A True                      B False
59. **Paraxial mesodermal cells adjacent to the neural tube form blocks of cells called:**  
 A myoblast                      B satellite cells                      C somites                      D pericyte
60. **A muscle with the opposite action of the prime mover is called a/an:**  
 A synergist                      B antagonist                      C fixator                      D agonist
61. **The —— is a circular muscle that moves the lips.**  
 A orbicularis oris                      B buccinator                      C orbicularis oculi                      D corrugator supercilii
62. **The extensor digitorum of the forearm is an example of a —— muscle.**  
 A pennate                      B unipennate                      C bipennate                      D multipennate
63. **In anatomical terminology, chewing is called:**  
 A comminution                      B rumination                      C deglutition                      D mastication
64. **The —— group forms the majority of the muscle mass of the back and is the primary extensor of the vertebral column.**  
 A iliocostalis                      B erector spinae                      C longissimus                      D spinalis capitis
65. **The anterior muscles include the subclavius, pectoralis minor, and:**  
 A serratus anterior                      B trapezius                      C rhomboid major                      D rhomboid minor
66. **The —— is the circle of tendons around the shoulder joint.**  
 A rotator cuff                      B sartorius                      C sternohyoid                      D palmaris longus
67. **The flexor retinaculum extends over the —— of the hand.**  
 A dorsal surface                      B palmar surface                      C distal phalanges                      D distal phalanx
68. **The four deep muscles in the posterior compartment of the leg are popliteus, flexor digitorum longus, flexor hallucis longus, and:**  
 A fibularis longus                      B extensor digitorum brevis                      C tibialis posterior                      D calcaneus

### UNIT 3: REGULATION, INTEGRATION, AND CONTROL

69. A localized collection of neuron cell bodies in the Central Nervous System (CNS) is referred to as a(n):  
A ganglion                      B nucleus                      C axon                      D dendrite
70. Neurons are usually described as having ——— axon(s).  
A one                      B two                      C three                      D four
71. Glial cells, or neuroglia or simply glia, are a type of cell found in nervous tissue.  
A True                      B False
72. A ——— opens because a signaling molecule, a ligand, binds to the extracellular region of the channel.  
A mechanically gated channel    B ligand-gated channel    C voltage-gated channel    D leakage channel
73. The action potential is initiated at the beginning of the axon, at what is called the ——— segment.  
A orsus                      B prime                      C proto                      D initial
74. There are ——— types of connections between electrically active cells, chemical synapses and electrical synapses.  
A two                      B three                      C four                      D five
75. The ——— is the outermost layer of gray matter in the brain, where conscious perception takes place.  
A cerebral cortex                      B cerebellum                      C cranium                      D thalamus
76. The ——— develops into the integumentary system and the nervous system.  
A exoderm                      B mesoderm                      C endoderm                      D ectoderm
77. The ——— is a vesicle which can be called the midbrain.  
A rhombencephalon                      B mesencephalon                      C prosencephalon                      D hindbrain
78. Broca's area is responsible for the production of language, or controlling movements responsible for speech.  
A True                      B False
79. Activity in the ——— is related to orienting the eyes to a sound or touch stimulus.  
A tectum                      B tegmentum                      C inferior colliculus                      D superior colliculus
80. The internal carotid artery enters the cranium through the ——— in the temporal bone.  
A circle of Willis                      B carotid canal                      C foramen magnum                      D occipital sinus
81. Cerebrospinal fluid is produced within the ventricles by a type of specialized membrane called a:  
A meningeal dura mater                      B telencephalon                      C choroid plexus                      D cerebral aqueduct
82. The ——— constitute a row of ganglia that receive central input from the lateral horn of the thoracic and upper lumbar spinal cord.  
A sympathetic chain ganglia                      B paravertebral ganglia                      C prevertebral ganglia                      D terminal ganglia
83. Axons from different spinal nerves will come together into a:  
A nerve plexus                      B ventral nerve root                      C dorsal nerve root                      D systemic nerve
84. The amygdala is nucleus deep in the temporal lobe of the cerebrum and is related to ——— and emotional behavior.  
A motor functions                      B visual sensation                      C memory                      D smell
85. An exteroceptor is a receptor that is located near a stimulus in the external environment, such as somatosensory receptors.  
A True                      B False



104. ——— is an excess contraction in resistance to stretch.
- A Spasticity                      B Fibrillation                      C Clasp-knife response                      D Fasciculation
105. ——— signaling requires more time than neural signaling to prompt a response in target cells.
- A Paracrine                      B Endocrine                      C Autocrine                      D Synaptic
106. Hormones derived from lipids include:
- A proteins                      B peptides                      C steroids                      D amines
107. The ——— is a structure of the diencephalon of the brain located anterior and inferior to the thalamus.
- A hypothalamus                      B infundibulum                      C cerebellum                      D frontal lobe
108. The ——— hormone stimulates the adrenal cortex to secrete corticosteroid hormones such as cortisol.
- A adrenocorticotrophic                      B thyroid-stimulating                      C Luteinizing                      D growth
109. The parathyroid hormone (PTH) is the major hormone involved in the regulation of blood calcium levels.
- A True                      B False
110. The ——— produces the hormone insulin and makes up approximately 75 percent of each pancreatic islet.
- A alpha cell                      B beta cell                      C delta cell                      D PP cell
111. ——— is a disorder in adults caused when abnormally high levels of GH trigger growth of bones in the face, hands, and feet.
- A Gigantism                      B Goiter                      C Acromegaly                      D Hyperparathyroidism

## UNIT 4: FLUIDS AND TRANSPORT

112. Plasma is composed primarily of water. In fact, it is about ——— percent water.
- A 68                      B 92                      C 75                      D 82
113. In the lungs, hemoglobin picks up oxygen, which binds to the iron ions, forming:
- A oxyhemoglobin                      B deoxyhemoglobin                      C hypoxemia                      D carbaminohemoglobin
114. The ——— is a major component of the body's defenses against disease.
- A erythrocyte                      B leukocyte                      C bilirubin                      D reticulocyte
115. Platelets are key players in hemostasis, the process by which the body seals a ruptured blood vessel and prevents further loss of blood.
- A True                      B False
116. When a portion of a thrombus breaks free from the vessel wall and enters the circulation, it is referred to as a/an:
- A thrombosis                      B fibrinolysis                      C lymphoblast                      D embolus
117. ——— is the formation of a blood clot; part of the process of hemostasis.
- A Hemoblast                      B Coagulation                      C Diapedesis                      D Thrombocytosis
118. The great veins, the superior and inferior venae cavae, and the great arteries, are attached to the ——— surface of the heart.
- A posterior                      B anterior                      C inferior                      D superior
119. The right ventricle pumps deoxygenated blood into the ———, which leads toward the lungs.
- A inferior vena cava                      B left atrium                      C pulmonary trunk                      D mitral valve
120. The septum between the atria and the ventricles is known as the atrioventricular septum.
- A True                      B False

121. The walls of the ventricle are lined with ———, ridges of cardiac muscle covered by the endocardium.  
 A purkinje fibers                      B trabeculae carneae                      C chordae tendineae                      D cardiac plexus
122. ——— supply blood to the myocardium and other components of the heart.  
 A Coronary arteries                      B Marginal arteries                      C Atrial arteries                      D Pulmonary arteries
123. Normal cardiac rhythm is established by the sinoatrial node, a specialized clump of myocardial conducting cells.  
 A True                      B False
124. There are five prominent points on the ECG: the P wave, the ———, and the T Wave.  
 A O wave                      B QRS complex                      C V wave                      D XY complex
125. In this type of heart block, the ECG would reveal some P waves not followed by a QRS complex, while others would appear normal:  
 A partial                      B complete                      C first-degree                      D second-degree
126. Individuals are cautioned to monitor their HR to ensure they stay within the target heart rate range between:  
 A 120 and 160 bpm                      B 60 and 100 bpm                      C 110 and 130                      D 130 and 150
127. ——— refers to the tension that the ventricles must develop to pump blood effectively against the resistance in the vascular system.  
 A Preload                      B Afterload                      C Contractility                      D Venous return
128. The heart forms from ——— around 18 to 19 days after fertilization.  
 A ectoderm                      B endoderm                      C mesoderm                      D cardiogenic cords
129. The ——— is composed of epithelial and connective tissue layers.  
 A tunica media                      B tunica intima                      C tunica externa                      D arteriole
130. The tunica externa is a substantial sheath of connective tissue composed primarily of collagenous fibers.  
 A True                      B False                      C                      D
131. If an artery or arteriole constricts to one-half of its original radius, the resistance to flow will increase ——— times.  
 A 1.5                      B 2                      C 4                      D 16
132. The net filtration pressure represents the interaction of the hydrostatic and osmotic pressures, driving fluid ——— the capillary.  
 A out of                      B into                      C near                      D to reabsorb within
133. As little as 30 minutes of exercise over the course of each day has been shown to lower the rate of heart attack by nearly 50 percent.  
 A True                      B False
134. ——— occurs when arterioles lose their normal muscular tone and dilate dramatically.  
 A Cardiogenic shock                      B Vascular shock                      C Anaphylactic shock                      D Septic shock
135. The ——— provides blood to the muscles of the thoracic cavity and the vertebral column.  
 A pericardial artery                      B esophageal artery                      C intercostal artery                      D superior phrenic artery
136. An ovarian artery is considerably ——— than a testicular artery.  
 A longer                      B shorter                      C wider                      D narrower
137. Blood from the brain and the superficial facial vein flow into each:  
 A internal jugular vein                      B azygos vein                      C superior vena cava                      D subclavian vein
138. Blood supply from the liver drains into each ——— and directly into the inferior vena cava.  
 A phrenic vein                      B hepatic vein                      C renal vein                      D adrenal vein



139. The ——— is a temporary blood vessel that branches from the umbilical vein, allowing freshly oxygenated blood from the placenta.  
 A ductus arteriosus      B foramen ovale      C fossa ovalis      D ductus venosus
140. Nervi Vasorum are small nerve fibers found in arteries and veins that trigger contraction of the smooth muscle in their walls.  
 A True      B False
141. Humans have about ——— lymph nodes throughout the body.  
 A 400-500      B 500-600      C 600-700      D 700-800
142. ——— are lymphoid nodules located along the inner surface of the pharynx and are key to developing immunity to oral pathogens.  
 A Granzymes      B Mast cells      C Tonsils      D Thymocytes
143. The primary barrier to the entrance of microorganisms into the body is the:  
 A lysozyme in the oral cavity      B acidity of the stomach      C mucous layer of the GI tract      D skin
144. ——— are T Cells that kill target cells by inducing apoptosis using the same mechanism as Natural Killer (NK) cells.  
 A Cytotoxic T cells (Tc)      B Regulatory T Cells (Treg)      C Helper T cells (Th)      D Memory T cells
145. This class of antibody is the one that crosses the placenta to protect the developing fetus from disease:  
 A IgM      B IgG      C IgA      D IgE
146. ——— occurs with diseases such as systemic lupus erythematosus, where soluble antigens accumulate in the blood to blood vessel linings.  
 A Delayed hypersensitivity      B Type III hypersensitivity      C Type II hypersensitivity      D Immediate Hypersensitivity
147. A natural killer cell (NK) is a cytotoxic lymphocyte of innate immune response.  
 A True      B False

## UNIT 5: ENERGY, MAINTENANCE, AND ENVIRONMENTAL EXCHANGE

148. The ——— is the concave surface that connects the apex of the nose to the upper lip.  
 A dorsum nasi      B philtrum      C bridge      D ala
149. The ——— help(s) maintain equal air pressure throughout the alveoli and lung.  
 A alveolar sac      B alveolar duct      C alveolar pores      D alveolus
150. Intrapleural pressure remains approximately ——— Hg throughout the breathing cycle.  
 A -1 mm      B -2 mm      C -3 mm      D -4 mm
151. ——— describes the behavior of gases when they come into contact with a liquid, such as blood.  
 A Dalton's law      B Henry's law      C Boyle's law      D Wolff's law
152. The ——— is a phenomenon that arises from the relationship between pH and oxygen's affinity for hemoglobin.  
 A chloride shift      B Haldane effect      C Root effect      D Bohr effect
153. ——— is a process of adjustment that the respiratory system makes due to chronic exposure to high altitudes.  
 A Inspiration      B Acclimatization      C Vital capacity      D Inspiratory reserve volume
154. The pharynx propels food from the oral cavity to the ——— and lubricates food and passageways.  
 A stomach      B esophagus      C small intestine      D large intestine
155. Perhaps the most important ingredient in saliva from the perspective of digestion is:  
 A glycoproteins      B ions      C salivary amylase      D growth factors

156. The ——— is the point where the esophagus connects to the stomach and through which food passes into the stomach.  
A cardia                      B fundus                      C pylorus                      D ruga
157. The coiled tube of the small intestine is subdivided into three regions: the duodenum, jejunum, and ileum.  
A True                      B False
158. The right colic flexure (hepatic flexure) and becomes the:  
A sigmoid colon                      B transverse colon                      C ascending colon                      D left colic flexure
159. A hepatocyte is the liver's main cell type, accounting for around ——— percent of the liver's volume.  
A 30                      B 80                      C 50                      D 60
160. The three lipases responsible for lipid digestion are lingual lipase, gastric lipase, and:  
A pancreatic lipase                      B pancreatic nuclease                      C ribonuclease                      D phosphatase
161. The ——— is a pointed tooth is used for tearing and shredding food.  
A cuspid                      B molar                      C dens                      D deciduous tooth
162. Of the four major macromolecular groups that are processed by digestion, ——— are considered the most common source of energy.  
A proteins                      B nucleic acids                      C lipids                      D carbohydrates
163. Cortisol, ———, and adrenaline/epinephrine are examples of catabolic hormones that help regulate metabolic processes.  
A insulin                      B glucagon                      C estrogen                      D testosterone
164. To start ———, citrate synthase combines acetyl CoA and oxaloacetate to form a six-carbon citrate molecule.  
A the Calvin cycle                      B glycolysis                      C the urea cycle                      D the Krebs cycle
165. When the food-gastric juice mixture enters the small intestine, the pancreas releases ——— to neutralize the HCl.  
A pepsin                      B elastase                      C sodium bicarbonate                      D chymotrypsin
166. ——— is the transfer of heat by two objects that are in direct contact with one another.  
A Convection                      B Conduction                      C Radiation                      D Evaporation
167. The amount of minerals in the body is small—only ——— percent of the total body mass.  
A 1                      B 2                      C 3                      D 4
168. The kidneys must produce a minimum urine volume of about ——— mL/day to rid the body of wastes.  
A 250                      B 350                      C 500                      D 600
169. The ——— is the entry and exit site for structures servicing the kidneys: vessels, nerves, lymphatics, and ureters.  
A calyces                      B renal hilum                      C medulla                      D renal papillae
170. The volume of filtrate formed by both kidneys per minute is termed the glomerular filtration rate (GFR).  
A True                      B False
171. A principal cell possesses channels for the recovery or loss of sodium and:  
A magnesium                      B sugar                      C potassium                      D insulin
172. Anuria is the absence of urine produced; production of ——— mL or less per day.  
A 50                      B 40                      C 30                      D 20
173. Intracellular fluid (ICF) makes up about ——— of the total water in the human body.  
A 40%                      B 60%                      C 75%                      D 50%

174. The kidney excretes ——— milliosmoles of solutes per day.  
 A 200-1000                      B 500-1400                      C 50-1500                      D 100-1200
175. ——— means a person has lower-than-normal levels of sodium in the blood.  
 A Hypernatremia                      B Hypocalcemia                      C Hyponatremia                      D Hypocapnia
176. ——— is released if blood levels of potassium increase, if blood levels of sodium severely decrease, or if blood pressure decreases.  
 A ADH                      B Aldosterone                      C Angiotensin                      D ANP
177. During the conversion of CO<sub>2</sub> into bicarbonate, hydrogen ions liberated in the reaction are buffered by:  
 A phosphate                      B bicarbonate-carbonic acid                      C Protein                      D Hemoglobin

## UNIT 6: HUMAN DEVELOPMENT AND THE CONTINUITY OF LIFE

178. The testes are each approximately ——— cm in length and are housed within the scrotum.  
 A 2 to 3                      B 3 to 4                      C 4 to 5                      D 5 to 6
179. The prostate normally doubles in size during puberty. At approximately age ———, it gradually begins to enlarge again.  
 A 25                      B 30                      C 40                      D 50
180. Testosterone, an androgen, is a steroid hormone produced by:  
 A Leydig cells                      B Theca cells                      C granulosa cells                      D Sertoli cells
181. The middle region of the uterine tube, called the ———, is where fertilization often occurs.  
 A isthmus                      B infundibulum                      C corpus luteum                      D ampulla
182. The innermost layer of the uterus is called the:  
 A perimetrium                      B myometrium                      C endometrium                      D fundus
183. Breast milk is produced by the ———, which are modified sweat glands.  
 A lactiferous ducts                      B mammary glands                      C lactiferous sinus                      D areolar glands
184. The release of LH occurs primarily at night during sleep and precedes the physical changes of puberty by several years.  
 A True                      B False
185. The ——— is a wide, distal portion of the uterine tube terminating in fimbriae.  
 A myometrium                      B infundibulum                      C fundus                      D mons pubis
186. If sperm do not encounter an oocyte immediately, they can survive in the uterine tubes for another ——— days.  
 A 2                      B 3                      C 2-4                      D 3-5
187. Following fertilization, the zygote and its associated membranes, together are referred to as the:  
 A morula                      B conceptus                      C blastocoel                      D trophoblast
188. The ——— connects to the conceptus via the umbilical cord, which carries deoxygenated blood and wastes from the fetus.  
 A amnion                      B yolk sac                      C placenta                      D mesoderm
189. During weeks ——— of fetal development, the brain continues to expand, the body elongates, and ossification continues.  
 A 9-12                      B 16-20                      C 21-28                      D 29-31
190. The pituitary hormone prolactin is instrumental in the establishment and maintenance of breast milk supply.  
 A True                      B False



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Fill in each blank. There are two options to submit the post-test.

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Option 1: Submit the post-test answers online at [radunits.com](http://radunits.com) on the course page for instant grading and emailed CE certificate. A password is required, which is found in your email receipt.

Option 2: Fax this answer sheet to us at 866-386-0472, or you may instead email a phone pic of the answer sheet to [clark@radunits.com](mailto:clark@radunits.com). Allow 2 days for grading, and we will email the CE certificate.

First name:

Last name:

Email:

ARRT license number:

Florida techs only - enter state license number. All others enter N/A.

Telephone:

Date:

When part of a group order or if the post-test is purchased under another name – enter the order number or purchasing name:

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