

Instructions: There are 50 questions; each is worth 2 pts. Write down the **best** answer for each one. Please make sure that you fill out your scantron correctly. In case of discrepancy, the answer on the scantron will be considered your answer. When you're finished, please hand in the scantron. You may keep the exam. Good luck!

- ___ 1) An example of a disease that is caused by your immune system attacking parts of your own body:
a) malaria b) sleeping sickness c) HIV/AIDS d) tuberculosis e) Multiple sclerosis
- ___ 2) A disease that attacks helper T-cells:
a) malaria b) sleeping sickness c) HIV/AIDS d) tuberculosis e) Multiple sclerosis
- ___ 3) A disease transmitted by tse-tse flies:
a) malaria b) sleeping sickness c) encephalitis d) West Nile e) Chagas' disease
- ___ 4) Waste product used by birds and many reptiles:
a) ammonia b) urea c) uric acid d) none of the above
- ___ 5) Establishes a salt concentration gradient in the kidneys:
a) glomerulus b) Bowman's capsule c) proximal tubule d) Loop of Henle
- ___ 6) An increasing amount of ADH makes the collecting duct:
a) more permeable to water b) less permeable to water
- ___ 7) **Not** produced by the **anterior** pituitary:
a) GH b) ADH c) ACTH d) MSH e) Prolactin
- ___ 8) Secreted by the pineal gland:
a) thyroxine b) insulin c) glucagon d) melatonin e) oxytocin
- ___ 9) To reduce blood sugar, the pancreas releases:
a) insulin b) glucagon c) thyroxine d) glucose e) glycerol
- ___ 10) As a result of this exam, your adrenal glands are probably releasing (pick **best** answer):
a) adrenalin b) corticosteroids c) ACTH
- ___ 11) The ability to grow a new individual from **pieces** that are broken off the body is:
a) fission b) fragmentation c) budding d) parthenogenesis
- ___ 12) Some female animals can lay eggs without the eggs needing to be fertilized. This is an example of:
a) fission b) hermaphroditism c) parthenogenesis d) fission
- ___ 13) True or false: some animals (e.g. fish) can change sex from female into male:
a) True b) False
- ___ 14) Humans have:
a) external fertilization b) internal fertilization

- ___ 15) An animal that lays eggs has what kind of reproduction?
a) oviparous b) viviparous c) ovoviviparous d) vivoviparous e) none of the above
- ___ 16) Sperm are matured and stored in the:
a) vas deferens b) seminal vesicles c) epididymis d) prostate gland
- ___ 17) Gland that contributes a clear mucus to semen. Also helps neutralize acidity.
a) vas deferens b) seminal vesicles c) bulbourethral glands d) testes
- ___ 18) Gland that often causes many medical problems in older men:
a) vas deferens b) bulbourethral glands c) prostate gland d) seminal vesicles
- ___ 19) Immediately after releasing the egg, the follicle:
a) disintegrates b) starts over and makes another egg c) becomes a corpus luteum
- ___ 20) Area of the female reproductive tract that is lined with cilia:
a) uterus b) cervix c) ovaries d) oviducts e) none of the above
- ___ 21) Follicles start to grow as a result of increasing levels of:
a) estrogen b) progesterone c) testosterone d) FSH e) oxytocin
- ___ 22) Progesterone is produced primarily by the:
a) anterior pituitary b) posterior pituitary c) corpus luteum d) pineal gland
- ___ 23) Contractions are started by increasing levels of:
a) prolactin b) estrogen c) oxytocin d) FSH e) LH
- ___ 24) True/False: A large part of the immunity in infants comes from the mother's breast milk:
a) True b) False
- ___ 25) The part of a neuron that takes a signal out of the cell:
a) nerve cell body b) axon c) dendrite
- ___ 26) Multiple sclerosis destroys:
a) neurons b) astrocytes c) the myelin sheath d) synapses
- ___ 27) Help maintain the blood/brain barrier:
a) neurons b) astrocytes c) the myelin sheath d) synapses
- ___ 28) At rest, a neuron has more K^+ ions on the:
a) inside b) outside
- ___ 29) Opening all the Na^+ gates in a neuron causes the inside of the neuron to become:
a) negative b) positive
- ___ 30) Synapses in humans are:
a) chemical b) electrical

- ___ 31) True or false: neurotransmitters always “excite” the post-synaptic neuron:
a) True b) False
- ___ 32) A really, really bad thing to give to an elephant:
a) LSD b) morphine c) serotonin d) dopamine
- ___ 33) A disease that can shut down pain receptors:
a) Tuberculosis b) Leprosy c) HIV/AIDS d) Malaria e) Sleeping sickness
- ___ 34) True or false: both hot and cold are sensed by the same receptors:
a) True b) False
- ___ 35) The three middle ear bone that transmits vibrations to the oval window:
a) hammer (= malleus) b) anvil (= incus) c) stirrup (= stapes)
- ___ 36) Used to equalize pressure in the middle ear:
a) upper canal b) lower canal c) sinuses d) eustachian tube e) eardrum
- ___ 37) The hairs inside the Organ of Corti brush against the:
a) upper canal b) lower canal c) tectorial membrane d) eustachian tube
- ___ 38) A healthy (younger) human can hear what range of frequencies (in Hz)?
a) 20 - 2,000 b) 15 - 3,000 c) 40 - 60,000 d) 20 - 20,000 e) 5 - 500
- ___ 39) Bats can use echolocation to determine all except which of the following about a moth:
a) speed b) direction c) texture d) size e) color
- ___ 40) An animal that can hear sounds below 20 Hz:
a) Bat b) Human c) Dog d) Elephant e) Sponge
- ___ 41) Movement (motion) is detected by the:
a) utricle b) saccule c) semi-circular canals d) Organ of Corti
- ___ 42) True or false: dogs and humans have about the same number of *different kinds* of chemoreceptor cells:
a) True b) False
- ___ 43) A bird found around here with a good sense of smell:
a) canary b) sparrow c) cardinal d) chicken e) vulture
- ___ 44) The “whites” of your eyes:
a) sclera b) choroid c) retina d) iris e) cornea
- ___ 45) This structure determines your eye color:
a) sclera b) choroid c) retina d) iris e) cornea
- ___ 46) Used to detect color:
a) rods b) cones c) none of the above

- ____ 47) True or false: some snakes can “see” infrared radiation (heat) using pits just below their eyes:
a) True b) False
- ____ 48) Thin filaments in myofibrils:
a) actin b) myosin
- ____ 49) ATP is needed to reset:
a) actin heads b) myosin heads c) tropomyosin
- ____ 50) Muscles that allow for sustained contractions (don't tire quickly):
a) fast fibers b) medium fibers c) slow fibers d) painfully slow fibers

Reminders:

- 1) Please put your G-number on the scantron before you hand it in.
- 2) You may keep the exam.
- 3) Use blackboard to look up your score (hopefully within 24 hours).