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!

e 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

c 2) A disease that attacks helper T-cells:
   a) malaria  b) sleeping sickness  c) HIV/AIDS  d) tuberculosis  e) Multiple sclerosis

b 3) A disease transmitted by tse-tse flies:
   a) malaria  b) sleeping sickness  c) encephalitis  d) West Nile  e) Chagas' disease

c 4) Waste product used by birds and many reptiles:
   a) ammonia  b) urea  c) uric acid  d) none of the above

d 5) Establishes a salt concentration gradient in the kidneys:
   a) glomerulus  b) Bowman's capsule  c) proximal tubule  d) Loop of Henle

a 6) An increasing amount of ADH makes the collecting duct:
   a) more permeable to water  b) less permeable to water

b 7) Not produced by the anterior pituitary:
   a) GH  b) ADH  c) ACTH  d) MSH  e) Prolactin

d 8) Secreted by the pineal gland:
   a) thyroxine  b) insulin  c) glucagon  d) melatonin  e) oxytocin

a 9) To reduce blood sugar, the pancreas releases:
   a) insulin  b) glucagon  c) thyroxine  d) glucose  e) glycerol

b 10) As a result of this exam, your adrenal glands are probably releasing (pick best answer):
   a) adrenalin  b) corticosteroids  c) ACTH

b 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

c 12) Some female animals can lay eggs without the eggs needing to be fertilized. This is an example of:
   a) fission  b) hermaphrodism  c) parthenogenesis  d) fission

a 13) True or false: some animals (e.g. fish) can change sex from female into male:
   a) True  b) False

b 14) Humans have:
   a) external fertilization  b) internal fertilization
a) 15) An animal that lays eggs has what kind of reproduction?
   a) oviparous  b) viviparous  c) ovoviviparous  d) viviparous  e) none of the above

b) 16) Sperm are matured and stored in the:
   a) vas deferens  b) seminal vesicles  c) epididymis  d) prostate gland

c) 17) Gland that contributes a clear mucus to semen. Also helps neutralize acidity.
   a) vas deferens  b) seminal vesicles  c) bulbourethral glands  d) testes

c) 18) Gland that often causes many medical problems in older men:
   a) vas deferens  b) seminal vesicles  c) prostate gland  d) seminal vesicles

c) 19) Immediately after releasing the egg, the follicle:
   a) disintegrates  b) starts over and makes another egg  c) becomes a corpus luteum

d) 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

d) 21) Follicles start to grow as a result of increasing levels of:
   a) estrogen  b) progesterone  c) testosterone  d) FSH  e) oxytocin

c) 22) Progesterone is produced primarily by the:
   a) anterior pituitary  b) posterior pituitary  c) corpus luteum  d) pineal gland

c) 23) Contraction are started by increasing levels of:
   a) prolactin  b) estrogen  c) oxytocin  d) FSH  e) LH

a) 24) True/False: A large part of the immunity in infants comes from the mother's breast milk:
   a) True  b) False

b) 25) The part of a neuron that takes a signal out of the cell:
   a) nerve cell body  b) axon  c) dendrite

c) 26) Multiple sclerosis destroys:
   a) neurons  b) astrocytes  c) the myelin sheath  d) synapses

b) 27) Help maintain the blood/brain barrier:
   a) neurons  b) astrocytes  c) the myelin sheath  d) synapses

a) 28) At rest, a neuron has more K⁺ ions on the:
   a) inside  b) outside

b) 29) Opening all the Na⁺ gates in a neuron causes the inside of the neuron to become:
   a) negative  b) positive

a) 30) Synapses in humans are:
   a) chemical  b) electrical
b_31) True or false: neurotransmitters always “excite” the post-synaptic neuron:
   a) True   b) False

a_32) A really, really bad thing to give to an elephant:
   a) LSD   b) morphine   c) serotonin   d) dopamine

b_33) A disease that can shut down pain receptors:
   a) Tuberculosis   b) Leprosy   c) HIV/AIDS   d) Malaria   e) Sleeping sickness

b_34) True or false: both hot and cold are sensed by the same receptors:
   a) True   b) False

c_35) The middle ear bone that transmits vibrations to the oval window (makes contact with the oval window):
   a) hammer (= malleus)   b) anvil (= incus)   c) stirrup (= stapes)

d_36) Used to equalize pressure in the middle ear:
   a) upper canal   b) lower canal   c) sinuses   d) eustachian tube   e) eardrum

c_37) The hairs inside the Organ of Corti brush against the:
   a) upper canal   b) lower canal   c) tectorial membrane   d) eustachian tube

d_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

e_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

d_40) An animal that can hear sounds below 20 Hz:
   a) Bat   b) Human   c) Dog   d) Elephant   e) Sponge

c_41) Movement (motion) is detected by the:
   a) utricle   b) saccule   c) semi-circular canals   d) Organ of Corti

a_42) True or false: dogs and humans have about the same number of different kinds of chemoreceptor cells:
   a) True   b) False

e_43) A bird found around here with a good sense of smell:
   a) canary   b) sparrow   c) cardinal   d) chicken   e) vulture

a_44) The “whites” of your eyes:
   a) sclera   b) choroid   c) retina   d) iris   e) cornea

a_45) This structure determines your eye color:
   a) sclera   b) choroid   c) retina   d) iris   e) cornea

b_46) Used to detect color:
   a) rods   b) cones   c) none of the above
a) True  

b) False

a) actin  

b) myosin

a) actin heads  

b) myosin heads  

c) tropomyosin

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).