

**Introductory Biology II**  
**Final Exam**  
**Spring, 2012**

Name: \_\_\_\_\_

G-number \_\_\_\_\_

**Instructions:** There are **65** questions. You may consider *5 of them as extra credit*. 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 your scantron. You may keep the exam. **Good luck!**

**Material covered by exam I:**

- c \_\_\_ 1) Blood is what kind of tissue type?  
a) muscle    b) epithelial    c) connective    d) nervous    e) vascular
- b \_\_\_ 2) Touching another surface transmits heat by:  
a) convection    b) conduction    c) evaporation    d) radiation    e) insulation
- b \_\_\_ 3) Humans are:  
a) ectothermic and homeothermic    b) endothermic and homeothermic  
c) ectothermic and poikilothermic    d) endothermic and poikilothermic
- a \_\_\_ 4) An example of a bulk feeder:  
a) human    b) mosquito    c) caterpillar    d) blue whale
- a \_\_\_ 5) In the short term, excess energy in the body is stored as:  
a) glycogen    b) starch    c) fat    d) protein    e) carbohydrates
- a \_\_\_ 6) True or false: amylase is released in the oral cavity and helps break down starch:  
a) True    b) False
- d \_\_\_ 7) The stomach wall releases (careful!):  
a) amylase    b) nucleases    c) pepsin    d) pepsinogen    e) lipase
- a \_\_\_ 8) A muscle that controls the entry of (partially) digested food into the duodenum:  
a) pyloric sphincter    b) cardiac sphincter    c) esophageal sphincter    d) diaphragm
- e \_\_\_ 9) An example of an animal that breathes only through its skin:  
a) human    b) fish    c) insect    d) bird    e) salamander
- a \_\_\_ 10) Frogs have:  
a) positive pressure breathing    b) negative pressure breathing    c) neutral pressure breathing
- d \_\_\_ 11) If you smoke, on average you will die about how many years earlier as a person who does not smoke?  
a) 2    b) 5    c) 10    d) 14
- e \_\_\_ 12) Smoking can cause all of the following except:  
a) lung cancer    b) premature wrinkling    c) emphysema  
d) increased blood pressure & bad cholesterol    e) there are no exceptions on this list
- d \_\_\_ 13) Each year, about how many people die as a result of smoking in the U.S.  
a) 1,000    b) 10,000    c) 100,000    d) 440,000

a \_\_\_ 14) The single biggest cause of preventable deaths in the United States is:

a) smoking

d \_\_\_ 15) In the fetus, most of the blood leaving the right ventricle goes to the:

a) lungs      b) left atrium      c) left ventricle      d) aorta/body      e) right atrium

**Material covered by exam II:**

c \_\_\_ 16) Thrombin:

a) turns Prothrombin into Postthrombin      b) turns fibrin into fibrinogen  
c) turns fibrinogen into fibrin      d) causes platelets to become sticky

a \_\_\_ 17) True or false: interferon can cure the common cold:

a) True      b) False

d \_\_\_ 18) Proteins and carbohydrates on the surface of a pathogen such as a bacteria are often seen as:

a) antibodies      b) interferon      c) B-cells      d) antigens      e) T-cells

d \_\_\_ 19) Perforin is usually released by:

a) B-cells      b) mast cells      c) Q-cells      d) cytotoxic T-cells      e) red blood cells

e \_\_\_ 20) *Antibodies* can do all of the following except:

a) coat viruses or bacteria      b) hook bacteria or viruses together  
c) act as signals for complement proteins      d) precipitate out toxins (antigens).  
e) destroy bacteria by engulfing them.

a \_\_\_ 21) The proximal tubule:

a) can be used to reabsorb nutrients      b) sets up the salt concentration gradient in the kidney  
c) returns potassium to the nephron by means of osmosis      d) is surrounded by Bowman's capsule  
e) regulates the permeability of the collecting duct(s)

b \_\_\_ 22) The permeability of the collecting duct is controlled by:

a) ACTH      b) ADH      c) FSH      d) estrogen      e) LH

d \_\_\_ 23) Causes contractions of the uterus:

a) FSH      b) LH      c) prolactin      d) oxytocin

a \_\_\_ 24) Oviparous describes an animal that:

a) lays eggs      b) has live birth      c) does not reproduce  
d) has asexual reproduction      e) none of the above

d \_\_\_ 25) Under normal circumstances, a fertilized egg will implant in the:

a) oviducts      b) cervix      c) ovaries      d) uterus

b \_\_\_ 26) Estrogen is produced by the:

a) testes      b) corpus luteum      c) posterior pituitary      d) pancreas

b \_\_\_ 27) The nerves in your hands are part of the:

a) CNS      b) PNS      c) impossible to tell

a \_\_\_ 28) At rest, a neuron has more  $K^+$  ions:

a) inside the cell      b) outside the cell

b\_\_ 29) Neurotransmitters are found in:  
a) electrical synapses      b) chemical synapses      c) none of the above

c\_\_ 30) A really, really, bad thing to give to an elephant:  
a) morphine    b) caffeine    c) LSD      d) water      e) serotonin

**Material covered by exam III:**

d\_\_ 31) Hearing is a:  
a) thermoreceptor    b) chemoreceptor    c) electromagnetic receptor    d) mechanoreceptor  
e) pain receptor

d\_\_ 32) Used to dampen (absorb) vibrations in the inner ear:  
a) hammer    b) anvil      c) stirrup      d) round window      e) oval window

d\_\_ 33) The whites of your eyes are made up of the:  
a) retina      b) cornea      c) choroid      d) sclera      e) iris

c\_\_ 34) In humans, this is black and used to absorb excess light:  
a) retina      b) cornea      c) choroid      d) sclera      e) iris

c\_\_ 35) Example of an animal that can "see" ultraviolet radiation:  
a) pit vipers    b) humans    c) insects      d) bats      e) sharks

e\_\_ 36) When an action potential arrives from a nerve, the sarcoplasmic reticulum releases:  
a) Na<sup>+</sup>      b) K<sup>+</sup>      c) Cl<sup>-</sup>      d) Mg<sup>++</sup>      e) Ca<sup>++</sup>

b\_\_ 37) Most of the muscles in humans are composed of:  
a) fast fibers      b) slow fibers      c) medium fibers      d) painfully slow fibers

d\_\_ 38) Found between the pia mater and the dura mater (pick *best* answer):  
a) spinal cord      b) thalamus      c) sensory nerves      d) arachnoid membrane

e\_\_ 39) Coordinates information coming from different parts of the body and sends it to the correct spot on the cortex:  
a) medulla    b) pons      c) hippocampus      d) corpus callosum      e) thalamus

c\_\_ 40) If you do well on this exam, you have successfully put a lot of (trivial?) facts into your:  
a) immediate memories      b) short term memories      c) long term memories

b\_\_ 41) Oak trees are:  
a) bryophytes      b) gymnosperms      c) angiosperms      d) a & b      e) a & c

a\_\_ 42) Xylem transports:  
a) water up the plant      b) nutrients around the plant      c) none of the above

b\_\_ 43) Logistic growth describes:  
a) a population that grows without limits      b) a population that is limited by k

b\_\_ 44) Squirrels, which die equally at any age, have what kind of survivorship curve?  
a) I      b) II      c) III      d) IV

c \_\_\_ 45) An example of an r-selected species:  
a) Elephants      b) Humans      c) Roaches

***New material:***

a \_\_\_ 46) True or false: the overall human population of the planet is growing:  
a) True      b) False

c \_\_\_ 47) Currently, the human population of the planet is about:  
a) 1 million    b) 2 billion    c) 7 billion    d) 29 trillion    e) 5 quadrillion

a \_\_\_ 48) True or false: each person in the United States uses far more resources than each person in India:  
a) True      b) False

d \_\_\_ 49) A country with a very fast doubling time:  
a) Russia      b) Italy      c) United States      d) Afghanistan

a \_\_\_ 50) True or false: despite implementing a 1 child/family policy in 1978, China's population is still growing:  
a) True      b) False

a \_\_\_ 51) True or false: two species in the same place can not coexist if they are competing for the same resources:  
a) True      b) False

b \_\_\_ 52) True or false: predation always decreases the diversity of a community:  
a) True      b) False

d \_\_\_ 53) An example of a mutualistic relationship:  
a) lion-zebra      b) sea urchin-kelp      c) tapeworm-human      d) ant-acacia

d \_\_\_ 54) A relationship in which one member gets a benefit and the other is not affected:  
a) predation    b) competition    c) mutualism      d) commensalism

c \_\_\_ 55) Fire is vital for the survival of some of these trees:  
a) oak      b) maple      c) pine      d) beech

d \_\_\_ 56) The process of going from bare soil back to forest (say around here) is termed:  
a) regression    b) supplementation    c) osmosis      d) succession

b \_\_\_ 57) A carnivore that eats herbivores is (in ecological terms) a:  
a) primary consumer      b) secondary consumer      c) tertiary consumer      d) producer

a \_\_\_ 58) Ayers rock in Australia represents what kind of reason to conserve?  
a) spiritual      b) economic      c) ecological      d) other

b \_\_\_ 59) Urbanization is what kind of threat to conservation?  
a) overexploitation      b) habitat destruction      c) environmental factor

a \_\_\_ 60) True or false: desertification is particularly bad in sub-Saharan Africa:  
a) True      b) False

c \_\_\_ 61) A fish that was overfished and caused the loss of over 40,000 jobs in New England and Canada:  
a) Salmon    b) Tuna    c) Cod    d) Sardines    e) Gold fish

- c \_\_\_ 62) Baby turtles often walk the wrong way after hatching due to:  
a) water pollution    b) air pollution    c) light pollution    d) pesticides
- d \_\_\_ 63) The main reason many birds of prey (hawks & eagles) were endangered is due to:  
a) carbon dioxide    b) ozone    c) acid rain    d) DDT    e) noise pollution
- d \_\_\_ 64) The most important thing we can do to preserve an animal:  
a) legislate protection    b) set up a reserve    c) control predators    d) study the animal
- d \_\_\_ 65) The Athi Plains are found on the south side of the:  
a) Serengeti    b) Everglades    c) Yellowstone    d) Nairobi National Park

***Reminders:***

Please put your *name* and *G-number* on the scantron before you hand it in.

You may keep your exam.

Your score on the final should be available on blackboard by Friday (tomorrow) afternoon.

Final grades will be available ***only*** through the patriotweb system.

***I hope you didn't find today too awful. Have a great summer!***