

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

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

Lab instructor's name: \_\_\_\_\_

**Introductory Biology II, Exam I  
Summer, 2005**

**Instructions:** There are 50 questions. 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 & exam sheet. **Good luck!**

a \_\_\_ 1) A simple columnar epithelial cell has:

- a) one layer    b) two layers    c) three layers    d) many layers    e) no layers

a \_\_\_ 2) A stratified cuboidal epithelial cell:

- a) covers surfaces    b) conducts nerve signals    c) contracts    d) connects things    e) none of the above

d \_\_\_ 3) Smooth muscle:

- a) helps move your arm    b) helps move your leg    c) helps your heart to beat  
d) helps move your stomach    e) none of the above

b \_\_\_ 4) Adipose tissue:

- a) helps connect muscle and bone    b) stores fats    c) contracts  
d) helps hold organs and tissues in place    e) stores sugars

d \_\_\_ 5) A skeletal muscle cell is:

- a) not very organized and has a single nucleus    b) very organized and has a single nucleus  
c) not very organized and multinucleate    d) very organized and multinucleate  
e) has intercalated disks

d \_\_\_ 6) Bone is a / an:

- a) epithelial tissue    b) nervous tissue    c) contractile tissue    d) connective tissue  
e) cartilage tissue

a \_\_\_ 7) The definition of homeostasis is:

- a) the maintenance of a constant internal environment    b) the fluctuations caused by temperature  
c) the response to thirst    d) the fluctuations caused by salt balance  
e) none of the above

b \_\_\_ 8) Conduction is the exchange of heat through:

- a) the movement of air    b) contact with another object    c) water evaporating  
d) direct exposure to sunlight    e) the movement of water

e \_\_\_ 9) An animal that generates its own heat and maintains a constant body temperature is an:

- a) ectotherm and poikilotherm    b) ectotherm and endotherm    c) ectotherm and homeotherm  
d) homeotherm and poikilotherm    e) endotherm and homeotherm

a \_\_\_ 10) If these animals are awakened from hibernation too early, they may not have enough energy left to awaken a second time:

- a) bats    b) bears    c) chipmunks    d) humans    e) squirrels

- b\_\_ 11) These animals can tolerate a large amount of urea (=metabolic wastes) in their blood during winter:  
a) bats      b) bears      c) chipmunks      d) humans      e) squirrels
- e\_\_ 12) Humans respond to cold by:  
a) shivering    b) moving blood to the skin    c) moving blood away from the skin  
d) a & b      e) a & c
- c\_\_ 13) An animal that eats nothing but plants is also known as a:  
a) carnivore    b) insectivore      c) herbivore      d) omnivore    e) detritivore
- a\_\_ 14) The Krebs cycle is responsible for providing:  
a) energy      b) raw materials      c) essential nutrients    d) sunlight      e) none of the above
- a\_\_ 15) In the long term, excess energy is stored as:  
a) fat          b) glycogen    c) carbohydrates      d) proteins      e) nucleic acids
- c\_\_ 16) An example of a raw material for humans is:  
a) vitamin A    b) vitamin B    c) organic carbon      d) fatty acid    e) sunlight
- d\_\_ 17) Vision problems and dry scaly skin may be caused by:  
a) an excess of vitamin A    b) an excess of vitamin D    c) an excess of vitamin C  
d) not enough vitamin A      e) not enough vitamin C
- d\_\_ 18) The mouth begins digestion with the chemical breakdown of:  
a) proteins    b) nucleic acids      c) fats      d) starch      e) pepsinogen
- e\_\_ 19) The first 25 cm of the small intestine is known as the:  
a) cecum      b) large intestine      c) omasum    d) ventricle    e) duodenum
- a\_\_ 20) In many herbivores, this is at the junction of the small and large intestines:  
a) cecum      b) large intestine      c) omasum    d) ventricle    e) duodenum
- b\_\_ 21) The pancreas provides enzymes to break down all of the following EXCEPT:  
a) proteins    b) iron      c) nucleic acids      d) carbohydrates      e) there are no exceptions
- c\_\_ 22) Bile is stored in the:  
a) liver      b) urinary bladder      c) gall bladder      d) small intestine      e) pancreas
- a\_\_ 23) Most nutrients are taken from the small intestine and further processed by the:  
a) liver      b) urinary bladder      c) gall bladder      d) small intestine      e) pancreas
- e\_\_ 24) Feces are stored in the:  
a) small intestine      b) urinary bladder      c) gall bladder      d) pancreas      e) rectum
- d\_\_ 25) The smell or taste of food causes the stomach wall to release:  
a) amylase into the bloodstream      b) amylase into the stomach    c) gastrin into the stomach  
d) gastrin into the bloodstream      e) none of the above
- e\_\_ 26) Trachea are found in:  
a) fish      b) fungi      c) lobster      d) isopods      e) insects
- a\_\_ 27) Gills are found in:  
a) fish      b) fungi      c) lizards      d) insects      e) humans

- e\_\_ 28) Lungs are found in:  
a) fish      b) fungi      c) insects      d) isopods      e) birds
- a\_\_ 29) Gills are made more efficient by:  
a) counter-current flow      b) same-current flow      c) being highly folded  
d) a & c      e) b & c
- b\_\_ 30) the trachea in humans is supported by:  
a) bone rings    b) cartilage rings      c) epithelial rings      d) the trachea does not need support
- e\_\_ 31) Helps to remove foreign particles from the trachea and bronchi:  
a) cilia      b) flagella      c) gills      d) mucus      e) a & d
- a\_\_ 32) These two groups of muscles help humans to breathe:  
a) diaphragm and ribs      b) diaphragm and shoulder      c) ribs and chest      d) chest and back  
e) ribs and abdominal
- a\_\_ 33) The alveoli are where:  
a) oxygen is taken up and carbon dioxide released    b) carbon dioxide is taken up and oxygen released  
c) oxygen is taken up and carbon monoxide released      d) none of the above
- c\_\_ 34) Humans have:  
a) positive pressure breathing      b) neutral pressure breathing      c) negative pressure breathing
- a\_\_ 35) The movement of air through the lungs of birds is:  
a) one way    b) two way    c) three way    d) four way    e) five way
- b\_\_ 36) In areas of high concentration hemoglobin:  
a) releases more oxygen      b) picks up more oxygen      c) does not interact with oxygen  
d) a & b      e) b & c
- e\_\_ 37) Smoking can do all of the following except:  
a) destroy cilia in the trachea & bronchi      b) kill macrophages in the lungs  
c) cause lung cancer      d) cause emphysema      e) give you youthful looking skin
- e\_\_ 38) Smoking kills about how many people in the U.S. each year?  
a) 44      b) 440      c) 4,400      d) 44,000      e) 440,000
- a\_\_ 39) Humans have a:  
a) closed circulatory system    b) open circulatory system    c) have no circulatory system  
d) perforated circulatory system
- d\_\_ 40) In the fetus, blood is provided by (careful: trick question!):  
a) the umbilical artery    b) the umbilical vein      c) the placenta      d) none of the above
- c\_\_ 41) The structure connecting the right and left atria in the fetus is known as the:  
a) ductus arteriosus    b) foramen magnum    c) foramen ovale      d) ductus foramen      e) the hole
- d\_\_ 42) From the right ventricle, blood is taken to the (in the adult):  
a) body      b) left ventricle      c) right atrium      d) lungs      e) liver

- b\_\_\_ 43) Heart sounds are caused by:  
a) the ventricles contracting    b) the heart valves closing    c) the ventricles relaxing  
d) the heart valves opening    e) the atria contracting
- d\_\_\_ 44) Stroke volume is:  
a) the amount of blood pumped by the right ventricle in one minute  
b) the amount of blood pumped by the left ventricle in one minute  
c) the amount of blood pumped by the right ventricle in one beat  
d) the amount of blood pumped by the left ventricle in one beat  
e) none of the above
- d\_\_\_ 45) Diastole refers to:  
a) the low blood pressure reading    b) the high blood pressure reading  
c) the contraction phase    d) the relaxation phase    e) none of the above
- c\_\_\_ 46) The atria are coordinated to beat at the same time by the:  
a) AV node    b) ventricles    c) SA node    d) EKG    e) ECG
- b\_\_\_ 47) The biggest peak in an EKG is caused by:  
a) the electrical signal causing the atria to contract  
b) the electrical signal causing the ventricles to contract  
c) the electrical signal dissipating as the atria relax  
d) the electrical signal dissipating as the ventricles contract  
e) the heart valves closing
- a\_\_\_ 48) Usually a person in good shape will have a resting heart rate that is lower than a person in bad shape:  
a) True    b) False    c) Can't tell
- a\_\_\_ 49) A fever can increase heart rate:  
a) True    b) False    c) Can't tell
- b\_\_\_ 50) To help move blood back to the heart, veins have:  
a) very high blood pressure    b) valves    c) suction coming from the heart    d) a & b

**Reminder:** please put the name of your lab instructor on the front of the exam, then hand in your scantron and this exam.