

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

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

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

Lab section: \_\_\_\_\_

**Introductory Biology II, Exam II**  
**Spring, 2006**

**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!**

- \_\_\_\_\_ 1) When you are exercising, capillaries would move blood away from the:  
a) muscles    b) brain    c) digestive system    d) heart    e) none of the above
- \_\_\_\_\_ 2) During anaphylactic shock:  
a) capillaries shut off the flow of blood to most of the body  
b) capillaries allow the flow of blood to most of the body  
c) capillaries move blood into the nephrons    d) capillaries don't do anything
- \_\_\_\_\_ 3) The lymphatic system:  
a) moves leftover blood to the kidneys  
b) picks up fluid left by the blood and returns it to the circulatory system  
c) moves blood back to the right atrium    d) moves fluid into the legs
- \_\_\_\_\_ 4) The percentage of non-living material in blood is about:  
a) 15%    b) 25%    c) 35%    d) 45%    e) 55%
- \_\_\_\_\_ 5) Platelets are a part of the:  
a) non-living component of blood    b) living component of blood
- \_\_\_\_\_ 6) The end product of the blood clotting pathway is:  
a) Thrombin    b) Pepsin    c) Fibrinogen    d) Fibrin    e) Thrombinogen
- \_\_\_\_\_ 7) Which of the following factors causing heart disease is not preventable?  
a) Smoking    b) Diet    c) Lack of exercise    d) aging
- \_\_\_\_\_ 8) An arrhythmia describes:  
a) a complete blockage of the coronary arteries    b) an irregular heart beat    c) heart valve failure  
d) congenital heart disease    e) none of the above
- \_\_\_\_\_ 9) A pathogen is:  
a) a disease causing organisms    b) a fun person    c) your lecture instructor    d) none of the above
- \_\_\_\_\_ 10) Anti-microbial enzymes are contained in which of the following:  
a) sweat    b) saliva    c) tears    d) all of the above    e) none of the above
- \_\_\_\_\_ 11) Interferon can help to slow the spread of:  
a) bacteria    b) viruses    c) parasites    d) lymphocytes    e) platelets

- \_\_\_\_\_ 12) B-cells are manufactured in the bone marrow and continue development in the :  
a) bone marrow      b) thymus      c) thyroid      d) liver      e) spleen
- \_\_\_\_\_ 13) B and T-cells have surfaces covered with:  
a) antigens      b) antigenic determinants      c) antigen receptors      d) phagocytes      e) effectors
- \_\_\_\_\_ 14) Upon being exposed to an antigen, B-cells make:  
a) effector cells      b) memory cells      c) helper T-cells      d) all of the above      e) a & b
- \_\_\_\_\_ 15) Immunity to a second infection with the same disease is provided by:  
a) effector cells      b) memory cells      c) helper T-cells      d) all of the above      e) a & b
- \_\_\_\_\_ 16) An APC:  
a) presents antigens to helper T-cells      b) activates B-cells      c) releases antibodies  
d) interacts directly with cytotoxic B-cells      e) a & d
- \_\_\_\_\_ 17) Type I diabetes results when the immune system attacks:  
a) the nervous system      b) the joints      c) the beta cells in the pancreas  
d) the muscular system      e) none of the above
- \_\_\_\_\_ 18) HIV attacks:  
a) Cytotoxic T-cells      b) B-cells      c) Memory cells      d) antibodies      e) helper T-cells
- \_\_\_\_\_ 19) Malaria is caused by:  
a) a virus      b) a parasite      c) a bacteria      d) bad air      e) none of the above
- \_\_\_\_\_ 20) Sleeping sickness is caused by:  
a) a virus      b) a parasite      c) a bacteria      d) a boring lecture      e) none of the above
- \_\_\_\_\_ 21) Sleeping sickness overwhelms the immune system by:  
a) hiding in the lymphatic system      b) killing T-Cells      c) killing phagocytes  
d) continually changing antigens      e) making antibodies
- \_\_\_\_\_ 22) An osmoconformer:  
a) does not regulate salt balance      b) regulates salt balance      c) lives in fresh water  
d) a & c      e) b & c
- \_\_\_\_\_ 23) Animals that use urea to equalize water concentrations inside and outside the body:  
a) Salmon      b) Bears      c) Trout      d) Eels      e) Sharks
- \_\_\_\_\_ 24) Metabolic waste products include all of the following *except*:  
a) Urea      b) Ammonia      c) Bleach      d) Uric acid
- \_\_\_\_\_ 25) Flame cells and protonephridia are found in:  
a) Mammals      b) Flatworms      c) Earthworms      d) Insects      e) Jellyfish
- \_\_\_\_\_ 26) Malpighian tubules are found in:  
a) Mammals      b) Flatworms      c) Earthworms      d) Insects      e) Jellyfish
- \_\_\_\_\_ 27) Fluids excreted by the glomerulus are collected by:  
a) the proximal tubule      b) the distal tubule      c) Bowman's capsule      d) Flame cells      e) ADH
- \_\_\_\_\_ 28) Important nutrients are usually reabsorbed by the:  
a) proximal tubule      b) Loop of Henle      c) Bowman's capsule      d) Flame cells      e) none of the above

- \_\_\_\_\_ 29) Not all nephrons have a:  
a) proximal tubule    b) distal tubule    c) Loop of Henle    d) Bowman's capsule    e) glomerulus
- \_\_\_\_\_ 30) A salt concentration gradient is established in the kidneys by the:  
a) proximal tubule    b) distal tubule    c) Loop of Henle    d) Bowman's capsule    e) glomerulus
- \_\_\_\_\_ 31) When the permeability of the collecting duct is increased, water is:  
a) absorbed by the kidney and put back in the body  
b) not absorbed and moved to the bladder  
c) this has nothing to do with water absorption
- \_\_\_\_\_ 32) The RAAS pathway responds to:  
a) an increase in body salt concentration    b) a decrease in body salt concentration  
c) a drop in blood pressure / volume    d) an increase in blood pressure / volume  
e) a & d
- \_\_\_\_\_ 33) One of two hormones made in the hypothalamus:  
a) GH (growth hormone)    b) Prolactin    c) ACTH    d) Oxytocin    e) endorphins
- \_\_\_\_\_ 34) Thyroxine slows the release of:  
a) Prolactin    b) ACTH    c) Oxytocin    d) endorphins    e) TSH
- \_\_\_\_\_ 35) Glucagon is:  
a) released by the alpha cells of the pancreas and increases blood sugar  
b) released by the alpha cells of the pancreas and decreases blood sugar  
c) released by the beta cells of the pancreas and increases blood sugar  
d) released by the beta cells of the pancreas and decreases blood sugar
- \_\_\_\_\_ 36) Type II diabetes is characterized by (*please read carefully; pick **best** answer!*):  
a) insufficient insulin    b) inability to make insulin    c) excess insulin    d) excess glucagon
- \_\_\_\_\_ 37) A form of asexual reproduction in which the parent splits into two roughly equal pieces:  
a) fission    b) budding    c) fragmentation    d) parthenogenesis    e) cloning
- \_\_\_\_\_ 38) A form of asexual reproduction in which an egg can develop without fertilization:  
a) fission    b) budding    c) fragmentation    d) parthenogenesis    e) cloning
- \_\_\_\_\_ 39) An animal with live birth, but in which the young do *not* get nutrients from the mother is:  
a) oviparous    b) viviparous    c) vivoviparous    d) ovoviviparous    e) none of the above
- \_\_\_\_\_ 40) Sperm are stored and matured in the:  
a) testes    b) vas deferens    c) seminal vesicles    d) prostate gland    e) none of the above
- \_\_\_\_\_ 41) The function of prostaglandins is to:  
a) provide nutrients    b) provide lubrication    c) cause contractions in the uterus  
d) enlarge the prostate    e) buffer semen
- \_\_\_\_\_ 42) The release of the egg by the follicle is termed:  
a) ovulation    b) menstruation    c) estruation    d) vivulation    e) none of the above
- \_\_\_\_\_ 43) The fallopian tubes are lined with:  
a) endometrium    b) flagella    c) the uterus    d) cilia    e) strong and powerful muscles

- \_\_\_\_\_ 44) The formation of secondary sexual characteristics in men is thought to be caused mostly by:  
a) estrogen    b) testosterone    c) progesterone    d) ACTH    e) LH
- \_\_\_\_\_ 45) Progesterone suppresses:  
a) estrogen    b) FSH    c) LH    d) a & b    e) b & c
- \_\_\_\_\_ 46) The LH surge directly causes:  
a) ovulation    b) the development of a corpus luteum    c) a thickening of the uterine wall  
d) all of the above    e) a & b
- \_\_\_\_\_ 47) About 6 - 7 days after fertilization, the human embryo is known as a:  
a) gastrocyst    b) neuroblast    c) gastrula    d) blastocyst    e) protostome
- \_\_\_\_\_ 48) The layer in the embryo that develops into the muscles, bones, and circulatory system is the:  
a) endoderm    b) mesoderm    c) ectoderm    d) ectoplasm    e) microderm
- \_\_\_\_\_ 49) During pregnancy, high levels of estrogen cause the formation of receptors for:  
a) FSH    b) LH    c) ACTH    d) estrogen    e) oxytocin
- \_\_\_\_\_ 50) Infants get much of their immunity from:  
a) breast milk    b) vitamin supplements    c) other infants    d) oxytocin    e) estrogen

***Reminder***

Please put the name of your lab instructor and your section number on the front of the exam, then hand in your scantron and this exam.