

## Placement Tests

When taking the placement tests, please show all your work. Just answers will not be accepted. You may use your calculator on math and science placement tests. Some of the tests are long so you may take them over multiple days. Parents are asked to proctor the test and no kibitzing. You may be unhappy with the placement of your child in a class. If you feel that an error has been made, wish a re-test, or plan for summer tutoring please contact the teacher to discuss options. Mail/email the test to the appropriate teacher. If you need to mail it to 2 teachers, make a copy and send to both ☺ Meanwhile you can go ahead and register your student for the class and we will make an adjustment if there is an issue with the test.

**PLEASE do NOT send registrations to the teacher only the tests.** Contact me if you have any questions: Desiree Voegele [clccoop03@yahoo.com](mailto:clccoop03@yahoo.com)

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## **ANATOMY AND PHYSIOLOGY – Pretest**

Note: *This test is intended to cover general advanced biology principles that should be understood prior to entering the A & P class. Although no passing grade is required, a poor result may indicate a lack of readiness for the class.*

*Please follow all directions. Each of the 50 questions has one correct answer. No outside resources may be used!*

**\*Please copy and mail results to: Anatomy Teacher, 812 Ellerslie Ct., SE, Leesburg, VA 20175**

1. Which is NOT a characteristic of a living organism?
  - a. Responds to stimuli
  - b. Reproduces
  - c. Moves from one location to another
  - d. Grows and develops
  
2. Which is correctly paired?
  - a. Carbohydrate – polysaccharide, provides short-term energy for cell
  - b. Protein – fatty acid, part of cell membranes
  - c. DNA – amino acids, provide cell structure
  - d. Lipids – nucleic acids, supply information for the cell
  
3. Which is NOT an **inorganic** compound?
  - a. Water
  - b. Salts
  - c. ATP
  - d. Minerals
  
4. Which has cytoplasm, nucleus, cell membrane, and ribosomes?
  - a. Prokaryotic cell
  - b. Bacterium
  - c. Eukaryotic cell
  - d. Both a and b

5. How can you identify the nucleus by looking through a microscope?
  - a. It is located at the center of the cell.
  - b. It is round in shape.
  - c. It is the largest organelle in the cell.
  - d. It is the smallest organelle in the cell.
6. Which cell has no nucleus?
  - a. Neuron
  - b. Muscle
  - c. Epithelial cell
  - d. Red blood cell
7. Cells contain a balance of salt and water. What happens if a cell is dropped into pure water?
  - a. There is not enough information to answer the question.
  - b. Water runs out of the cell.
  - c. The water level remains constant.
  - d. Water moves into the cell.
8. Mitosis is very similar to
  - a. The first 4 steps of meiosis
  - b. The last 4 steps of meiosis
  - c. The first 4 steps of cellular respiration
  - d. The last 4 steps of cellular respiration
9. Why are mitosis and meiosis similar?
  - a. Both produce glucose
  - b. Both produce the same number of daughter cells
  - c. Are two names for the same process
  - d. Both involve cellular division
10. Cells group together to form

- a. Cellular systems
  - b. Tissues
  - c. Organs
  - d. Ecosystems
11. Muscle and bone cells are mixed together in a sample. How can one determine which are the muscle cells?
- a. Muscle cells have a shape that allows them to expand or contract.
  - b. Bone cells have a shape that allows them to get longer or shorter.
  - c. Muscle cells are shaped like blood cells.
  - d. Both a and c
12. Why might a blood cell have a different shape than a muscle cell?
- a. Cell shapes are related to their function.
  - b. Specialized cells often have a special shape.
  - c. They have the same shape.
  - d. Both a and b.
13. How would you know if certain specialized cells came from a sample of nervous tissue?
- a. The cells would be specialized to receive and send signals.
  - b. The cells would be specialized to expand and contract.
  - c. The cells would give the tissue structure and support.
  - d. The cells would fit closely together to form a barrier.
14. Your arm needs tissues to give it support and flexibility to allow it to move. What two tissue types fulfill these requirements?
- a. Connective and smooth muscle tissues.
  - b. Connective and skeletal muscle tissues.
  - c. Cardiac and connective tissues.
  - d. Smooth and skeletal muscle tissues.
15. How could you determine if a tissue you are looking at could only be from a heart?

- a. The heart is the only organ that has connective tissue.
  - b. The heart is the only organ that has smooth muscle tissue.
  - c. The heart is the only organ that has cardiac muscle tissue.
  - d. The heart is the only organ that has epithelial tissue.
16. What organ is composed of billions of nerve cells?
- a. Heart
  - b. Bladder
  - c. Pancreas
  - d. Brain
17. How does your body remove unwanted sugars and salts from your body?
- a. Your kidneys filter out sugars and salts.
  - b. Your pancreas filters out sugars and salts.
  - c. Your liver filters out sugars and salts.
  - d. Your large intestines filter out sugars and salts.
18. Which organ is made primarily of connective tissue and works with other organs to give your body support and protection?
- a. Skin
  - b. Bone
  - c. Muscle
  - d. Fat
19. If you have a pet that isn't getting nourishment from the food it eats, which organ might have a problem?
- a. Stomach
  - b. Heart
  - c. Kidney
  - d. Liver

20. If your body isn't getting the oxygen it needs to survive, what organ is functioning incorrectly?
- a. Heart
  - b. Brain
  - c. Lungs
  - d. Kidneys
21. What organ is composed mainly of epithelial and nervous tissue that converts vibrations into impulses that are sent to the brain?
- a. Eye
  - b. Tongue
  - c. Nose
  - d. Ear
22. How does the endocrine system regulate the body's function?
- a. It produces hormones.
  - b. It produces electrical impulses.
  - c. It fights against pathogens.
  - d. It controls the amount of oxygen in the bloodstream.
23. How does the lymphatic system function with the circulatory system?
- a. It carries blood to the heart.
  - b. It carries blood away from the heart.
  - c. It returns leaked fluids to the circulatory system.
  - d. It doesn't have anything to do with the circulatory system.
24. How does oxygen from the lungs get into your blood?
- a. The lungs pressurize the oxygen and force it into the heart.
  - b. The capillaries around the alveoli absorb oxygen.
  - c. Oxygen in the lungs is separate from the oxygen in the blood.
  - d. The lymphatic system carries oxygen leaked from the lungs to the heart.

25. Why is the left ventricle of the heart larger than the right ventricle?
- The left ventricle pumps blood to the body; the right ventricle pumps blood to the lungs .
  - The right ventricle pumps blood to the body; the left ventricle pumps blood to the lungs.
  - The left ventricle pumps blood to the lungs and the rest of the body.
  - The left ventricle is not larger than the right ventricle.
26. Why are there valves between the different chambers of the heart?
- The valves spin like propellers to drive blood through the heart.
  - The valves make sure blood doesn't leak out of the heart.
  - The valves insure that the blood flows in the proper direction.
  - The valves protect the heart from infection.
27. How could you tell if a blood vessel was an artery or a vein?
- Arteries carry electrical impulses; veins carry blood.
  - You can only tell the difference by using a microscope.
  - Veins carry blood away from the heart, arteries carry blood towards the heart.
  - Veins carry blood towards the heart; arteries carry blood away from the heart.
28. Why is the spleen part of the immune system?
- It surrounds the liver, protecting it from infection.
  - It produces white blood cells that fight infection.
  - It produces hormones that help fight infection.
  - It produces sperm and eggs.
29. Integumentary system is another name for the
- Immune system
  - Muscles and bones
  - Kidneys, bladder, and ducts
  - Skin, hair, nails, and sweat glands

30. Which is NOT a type of joint?

- a. Ball and socket
- b. Pivot
- c. Hinge
- d. Sliding

31. Which IS a type of bone?

- a. Square
- b. Regular
- c. Long
- d. Small

32. Which bone is NOT in the arm?

- a. Calcaneus
- b. Humerus
- c. Radius
- d. Ulna

33. Which muscle is in the leg?

- a. Deltoid
- b. Masseter
- c. Pectoralis Major
- d. Gastrocnemius

34. The \_\_\_\_\_ is another name FOR the throat.

- a. Larynx
- b. Pharynx
- c. Uvula
- d. Hard Palate

35. Which is NOT part of the Digestive System?
- a. Liver
  - b. Thymus
  - c. Galbladder
  - d. Pancreas
36. What makes up the largest component of the blood?
- a. Red blood cells
  - b. White blood cells
  - c. Platelets
  - d. Plasma
37. Which is not a cutaneous sensation?
- a. Heat
  - b. Color
  - c. Pressure
  - d. Pain
38. Animal responses can be controlled by the Nervous System and
- a. Renal artery
  - b. Circulatory system
  - c. Enzymes
  - d. Hormones
39. An antibiotic is a substance used to:
- a. Kill germs on skin
  - b. Kill bacteria inside the body
  - c. Kill viruses inside the body
  - d. Make a vaccine

40. A behavior that results from observation or experience is a(n) \_\_\_\_\_ behavior.
- Worked
  - Schooled
  - Innate
  - Learned
41. Genetic make-up of an organism is referred to as its:
- Genotype
  - Allele
  - Phenotype
  - Karyotype
42. If an allele for a particular trait masks another allele for that trait, the allele is
- Recessive
  - Hidden
  - Dominant
  - Incompletely dominant
43. A characteristic controlled by one or more genes is called a
- Trait
  - Protein
  - Chromosome
  - Stimulus
44. A group of amino acids linked together is a
- Trait
  - Protein
  - Chromosome
  - Gene

45. A sample of DNA contains 500 adenine bases. How many thymine bases does it contain?
- a. 250
  - b. 1000
  - c. 500
  - d. Any number of thymine bases is possible.
46. DNA in the nucleus is compacted in large structures called
- a. Proteins
  - b. Amino acids
  - c. Chromosomes
  - d. Nucleotides
47. The sense of balance is located in the
- a. Brain
  - b. Spinal cord
  - c. Heart
  - d. Ear
48. The point of reference for all directional terms of the body is called the
- a. Anatomical position
  - b. Anterior position
  - c. Standard position
  - d. Normal position
49. The main parts of a basic lab report are
- a. Purpose, materials, procedure, results, conclusion
  - b. Time, materials, procedure, results, conclusion
  - c. Purpose, time, procedure, results, conclusion
  - d. Purpose, materials, time, results, conclusion

50. The sanctity of human life is based on the principle that
- a. all humans are sanctified.
  - b. human life is more valuable than all other forms of life.
  - c. man is more intelligent than animals.
  - d. man is responsible to God for his actions.

Please complete the following personal information legibly:

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High School science courses completed:

Comments?

