

THE FOLLOWING RESOURCE MAY NOT COVER ALL FINAL EXAM MATERIAL

Department of Natural Sciences SCB-203 Final Exam Form G

Select the best answer.

1. Skeletal muscle is called _____, because it is usually subject to conscious control.
 - A. Excitable.
 - B. Contractile.
 - C. Striated.
 - D. Voluntary.

2. A dark band formed by parallel thick filaments that partly overlap the thin filaments is known as an H band.
 - A. True.
 - B. False.

3. The sarcoplasmic reticulum stores:
 - A. Glucose.
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 - C. Calcium.
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 - E. ATP.

4. The portion of a sarcomere that contains the thick filaments and the zone of overlap is the:
 - A. I band.
 - B. A band.
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5. Which type of contraction generates less force than that of the external load and the muscle lengthens?
 - A. Isotonic concentric.
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6. Which will convert a fused tetanus into an unfused tetanus?
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7. Larry's muscles weakened while he played tennis for hours on a hot summer afternoon. This inability to maintain intensity is defined as:
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8. A common symptom of someone in a prolonged comatose state is dramatic muscle weakness from disuse and decrease in muscle diameter. What is the most likely pathology?
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- A. Blood performs immune functions.
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10. A centrifuged sample of blood shows 53% plasma, 1% buffy coat, and 46% erythrocytes. What percent of the blood is composed of leukocytes and platelets?
- A. 1%.
 - B. 46%.
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11. Select the appropriate pathway for the steps of hemostasis.
- A. Vascular spasms, coagulation, platelet plug formation, clot retraction, thrombolysis.
 - B. Platelet plug formation, vascular spasms, coagulation, clot retraction, thrombolysis.
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12. Some rat poisons contain a toxin that block's the liver's ability to utilize vitamin K. Animals that consume this poison would have problems with:
- A. Agglutination.
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13. Mother-fetus incompatibility problems result from _____
- A. The mother's antibodies agglutinating the fetus' Rh positive red blood cells.
 - B. The mother's antibodies agglutinating the fetus' Rh negative red blood cells.
 - C. The fetus' antibodies agglutinating its mother's red blood cells.
 - D. The fetus' antibodies agglutinating its own red blood cells.
14. The most common cause of abnormal hemoglobin is an inherited condition known as sickle-cell anemia.
- A. True.
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15. Mother-fetus Rh blood type incompatibility problems can occur if the mother is _____ and her fetus is _____
- A. Rh positive; Rh positive.
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14. Leukemia may cancers of blood cells or bone marrow.
- A. True.
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15. The right and left coronary arteries receive blood from the:
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16. Normal heart sounds are caused by which of the following events?
- A. Excitation of the SA node.
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17. During which phase of the cardiac cycle are both the atrioventricular valves and the semilunar valves closed at the same time when enough pressure builds in the ventricles?
- A. Ventricular Filling Phase.
 - B. Isovolumetric Contraction Phase.
 - C. Ventricular Ejection Phase.
 - D. Isovolumetric Relaxation Phase.

18. Which part of the electrocardiogram (ECG) would *most* be affected by abnormally slow depolarization of the ventricles?
- A. P wave.
 - B. QRS wave.
 - C. T wave.
 - D. R-T interval.
19. What is the cause of arrhythmia?
- A. Coronary atherosclerosis.
 - B. Pacemaker conduction system is malfunctioning.
 - C. Ischemia to myocardium.
 - D. The heart is in perfect condition.
20. What is the stroke volume of a small child that has a cardiac output of 4,200 ml and a heart rate of 100 beats in 60 seconds?
- A. 70 ml.
 - B. 60 ml.
 - C. 42 ml
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21. Which of the following affects blood flow through the body?
- A. Blood viscosity.
 - B. Vessel diameter.
 - C. Turbulence.
 - D. Vascular resistance.
 - E. All the answers are correct.
22. Select the correct relationship between peripheral resistance and blood pressure.
- A. As peripheral resistance increases, blood pressure decreases.
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23. Water crosses capillary beds by:
- A. Diffusion.
 - B. Transcytosis.
 - C. Filtration.
 - D. Facilitated diffusion.

24. Determine the net filtration pressure (NFP) if capillary hydrostatic pressure is 40 mm Hg and the colloid osmotic pressure is 25 mm Hg.
- A. 15 mm Hg.
 - B. -15 mm Hg.
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26. What cells clean and digest debris entering the alveoli?
- A. Type I alveolar cells.
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27. Which of the following would lead to hemoglobin dropping off more oxygen to the tissues?
- A. Decreased levels of PCO_2 .
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 - C. Acidosis.
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28. Which of the following does **NOT** occur during inspiration?
- A. The diaphragm moves downward.
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29. About 70% of carbon dioxide is transported in deoxygenated blood:
- A. As dissolved CO_2 in the blood plasma.
 - B. As bicarbonate ions bound to hemoglobin in red blood cells.
 - C. Combined with hemoglobin as carbaminohemoglobin.
 - D. As bicarbonate ions in the blood plasma.
 - E. As carbonic acid in the red blood cells.

30. Carbon dioxide and water combine to form:

- A. Hydrochloric acid.
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- C. Carbonic acid.
- D. Carbaminohemoglobin.
- E. Nitric acid.

31. Which is **NOT** a function of the lymphatic system?

- A. Regulation of interstitial fluid volume.
- B. Absorption of fatty acids.
- C. Immune functions.
- D. Erythropoiesis.

32. Where does the right lymphatic duct replace the fluid lost by filtration at the capillaries?

- A. Between the right internal jugular and right subclavian vein.
- B. Between the right internal jugular and right external jugular vein.
- C. Between the right internal jugular and right vertebral vein.
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33. All are correct about the thymus gland **EXCEPT**:

- A. It gradually shrinks as you get older.
- B. It does not trap pathogens
- C. It is the site of B lymphocytes maturation.
- D. It is an endocrine organ.

34. Which is correct about lymph nodes?

- A. Each person has one pair of lymph nodes.
- B. It has an outer medulla and an inner cortex.
- C. Lymph enters through an afferent lymphatic vessel.
- D. They are part of the mucosa-associated lymphatic tissues.
- E. They do not have an outer capsule.

35. All are common cell types in lymphatic tissue **EXCEPT**:

- A. Macrophages.
- B. Dendritic cells.
- C. Merkel cells.
- D. Reticular cells.

36. Which is an example of a mucosa-associated lymphatic tissue?
- A. Lymph nodes.
 - B. Spleen
 - C. Appendix.
 - D. Thymus gland.
37. Both B and T cells are direct producers of antibodies.
- A. True.
 - B. False.
38. A venomous snake bit Sam while on a nature hike with a group of friends. She was immediately given venom antiserum. What type of antibody-mediated immunity is this considered?
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39. What is the function of plasma cells?
- A. They produce mature B cells.
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 - C. They produce mature T cells.
 - D. They produce class I MHC molecules.
40. What is the specific role of the IgD class of antibodies?
- A. They act as receptors and are found on the surface of T cells.
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 - C. They act as receptors and bind mast cells.
 - D. They function in complement fixation.
41. Which is the first antibody produced in the primary immune response?
- A. IgG.
 - B. IgM.
 - C. IgA.
 - D. IgD.
42. When a person has an autoimmune disorder, antibodies are secreted that bind to:
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43. In _____, the patient produces antibodies to protect themselves 3-5 days after exposure to a virus.
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46. Which type of immunity occurs when a fetus receives antibodies across the placenta?
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47. The clumping of cells due to the binding of antibodies is called:
- A. Opsonization.
 - B. Agglutination.
 - C. Neutralization.
 - D. Fixation.
48. Vaccinations that use inactivated vaccines generally require boosters.
- A. True.
 - B. False.
49. Which functions in opsonization?
- A. IgM.
 - B. IgE.
 - C. IgG.
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50. Which is a pentameric antibody?

- A. IgA.
- B. IgE.
- C. IgM.
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Department of Natural Sciences SCB-203 _Ans Key

Select the best answer.

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