

○ 在笔记中确认出处.

○ 忘了的知识点.

○ 不在课本上的那里

ANP 1105 Practice Midterm #2:

1. Which of the following lists the elements of the heart's conduction system in the correct order?

- a. SA node, AV bundle, bundle branches, AV node, Purkinje fibers
- b. AV, node, AV bundle, SA node, bundle branches, Purkinje fibers
- c. Purkinje fibers, AV bundle, bundle branches, AV node, SA node
- d. SA node, AV node, AV bundle, bundle branches, Purkinje fibers
- e. None of the above

2. Which one of the following statements is false? X

- a. Alpha-adrenergic effects dominate the control of blood pressure ○
- b. The adrenal medulla is considered a "misplaced" sympathetic ganglion by some ○
- c. Acetylcholine is the substance released by axonal endings of the somatic efferent fibers and by the parasympathetic nerve fiber endings ✓
- d. The sympathetic and parasympathetic divisions of the ANS have the same effect on most body organ systems

3. The secretions of the adrenal medulla act to supplement the effects of:

- a. Parasympathetic innervation
- b. Sympathetic stimulation ✓
- c. Vagus nerve activity
- d. Neurosecretory substances

4. A type of anemia that is due to a deficiency of intrinsic factor production is:

- a. Aplastic → bone marrow X
- b. Sickle cell X
- c. Hemolytic X
- d. Pernicious → B<sub>12</sub> → X divide [produce intrinsic factor] [destroy stomach mucosa that

5. Which sequence of events is correct in response to an injury that has penetrated through the skin and damaged an underlying blood vessel?

- a. Formation of tissue factor, prothrombin>>thrombin, fibrinogen>>fibrin, activation of plasmin
- b. Fibrinogen>> fibrin, activation of plasmin, formation of tissue factor, prothrombin>>thrombin
- c. prothrombin>>thrombin, formation of tissue factors, fibrinogen>>fibrin, activation of plasmin
- d. Formation of tissue factor, activation of plasmin, fibrinogen>>fibrin, prothrombin>>thrombin

6. When ventricular pressure exceeds atrial pressure what event occurs first?

- a. AV valves open
- b. AV valves close
- c. Semilunar valves open
- d. Semilunar valves close





7. Blood flows from the pulmonary veins into the:

- a. Right atrium
- b. Left atrium
- c. Lungs
- d. Left ventricle

8. When the cardiac output = 15 L/min and the HR = 100 beats/min, the stroke volume equals....

- a. 70ml
- b. 100ml
- c. 1500ml
- d. 150ml

$$15 \text{ L} = \frac{15000 \text{ mL}}{\text{CO}} \text{ min} \quad 15000 \text{ mL/min} \times \frac{1 \text{ min}}{100 \text{ beats}} = 150 \text{ mL/beat}$$

9. Which of the following does not describe the ANS ~~X~~

- a. A system of motor neurons that innervate smooth and cardiac muscle and glands ✓
- b. A system of motor neurons that innervated all muscle cells ✓
- c. Involuntary nervous system ✓
- d. General visceral motor system ✓

10. Steroid hormones exert their action by → lipid-soluble

- a. Binding cell receptors and initiating cAMP activity
- b. Entering the nucleus of a cell and initiating or altering the expression of a gene.
- c. Entering the cell and activating mitochondrial DNA ✓ in nuclei
- d. Activating the hypothalamic release of regulating hormone

11. Preparing the body for the "fight-or-flight" response in the role of the

- a. Sympathetic nervous system
- b. Cerebrum
- c. Parasympathetic nervous system
- d. Somatic nervous system

12. Control of temperature, endocrine activity, and thirst are functions associated with the

- a. Medulla
- b. Cerebellum
- c. Hypothalamus
- d. Thalamus

13. The cells of the myocardium are joined by specialized junctions called:

- a. Desmosomes
- b. Gap junctions
- c. Intercalated discs
- d. All of the above
- e. None of the above

14. Which of the following chemicals is an enzyme that converts fibrinogen to fibrin?

- a. Heparin
- b. Thrombin
- c. Prothrombin
- d. Coagulation factor VI
- e. Tissue factor

15. Which of the following is TRUE about erythropoietin?

- a. It is produced in red bone marrow in response to ~~increased~~ blood oxygen levels
- b. It induces production of platelets
- c. Its production is usually higher in low altitudes
- d. Its production increases at ~~higher altitudes~~

16. When red blood cells transport respiratory gases:

- a. Both oxygen and carbon dioxide bind to the globin portion of hemoglobin ~~X~~
- b. Carbon dioxide binds to the heme portion and oxygen binds to the globin portion of hemoglobin ~~X~~
- c. The main form of gas transport in the body is through the plasma
- d. Both oxygen and carbon dioxide bind to the heme portion of the hemoglobin ~~X~~
- e. Oxygen binds to the heme portion while carbon dioxide binds to the globin portion of hemoglobin

17. The dicrotic notch occurs in response to:

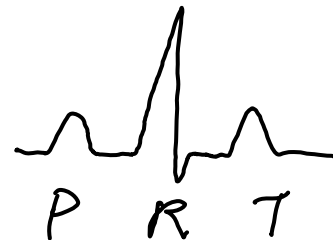
- a. Closing of the pulmonary valve
- b. Atrial systole
- c. Opening of the AV valves
- d. Closing of the aortic valve
- e. Ventricular systole

18. The space between the parietal and visceral layers of the pericardium is normally filled with:

- a. Air
- b. Blood
- c. Adipose tissue
- d. Serous fluid
- e. Serum

19. P waves on an ECG represent:

- a. Depolarization of the ventricles
- b. Repolarization of the ventricles
- c. Depolarization of the atria
- d. Repolarization of the atria
- e. Ventricular systole



20. Which of these effectors is no direction controlled by the autonomic nervous system?

- a. Smooth muscle
- b. Cardiac muscle
- c. Skeletal muscle
- d. Most glands

21. Which of the following is ~~NOT~~ true about hemophilia?

- a. It is a genetic disorder ✓
- b. It is caused by lack of clotting factors ✓
- c. It is caused by the lack of oxygen
- d. Type A hemophilia is the most common type ✓
- e. B and C are both correct <sup>AB+</sup>

22. Sharon's blood was determined to be AB positive. This means that...

- a. There are no antibodies to A, B, or Rh antigens in her plasma ✓
- b. There antibodies to A and B present in her plasma X
- c. Her blood lacks the RH antigen X
- d. She can only receive blood from a donor who is AB positive X



23. Which of the following statements is TRUE?

- a. Reticulocytes are immature RBCs ✓
- b. Platelets have nuclei but do not contain other organelles X
- c. RBCs occupy about 35% of a total blood volume ~~X~~ <sup>~45</sup>
- d. The number of RBCs is higher in females than in males ✓

24. What is the difference between a thrombus and an embolus

- a. An embolus is a thrombus that has become mobile ✓
- b. A thrombus occurs in the bloodstream whereas an embolus occurs outside the bloodstream X
- c. An embolus occurs in arteries and a thrombus occurs in veins.
- d. A thrombus is a blood clot and an embolus is a parasitic worm

25. Hemolytic anemia results from

- a. Excessive blood loss X
- b. Prematurely ruptured erythrocytes ✓
- c. A deficiency of vitamin B<sub>12</sub>
- d. Absent of faulty globin chain in hemoglobin
- e. Inadequate intake of iron

26. Thrombocytopenia is a condition with

- a. An increased number of circulating platelets
- b. A decreased number of circulating platelets ✓
- c. An increased number of red blood cells
- d. A decreased number of red blood cells

27. Blood doping is dangerous because it

- a. Raises oxygen delivery to all tissues to unnaturally high levels
- b. Increases blood viscosity ✓
- c. Increases the blood concentration of white blood cells
- d. Raises the blood concentration of platelets to unnaturally high levels

28. Which of the following may trigger erythropoiesis?

- a. Moving from high altitude to low altitude
- b. Decreased tissue demand for oxygen ✗
- c. Increased number of RBCs ✗
- d. Increased tissue demand for oxygen ✗

29. \_\_\_\_\_ is not a phase of hemostasis.

- a. Vascular spasm ✓
- b. Fibrinolysis
- c. Platelet plug formation ✓
- d. Coagulation ✓

30. Which of the following is the "stress hormone"?

- a. Cortisol → released by adrenal gland
- b. Growth hormone
- c. TSH → Thyroid - stimulating hormone
- d. Testosterone
- e. Oxytocin

31. Which of the following hormones are produced by the hypothalamus but stored in the posterior pituitary?

- a. LHRN and GHRH
- b. TSH and CRH
- c. Oxytocin and ADH
- d. GH and prolactin
- e. Oxytocin and ACTH

32. Which of the following IS NOT regulated by the parasympathetic nervous system?

- a. Shunting of blood from one area of the body to another ✗
- b. Elimination of urine and feces ✓
- c. Decrease heart rate ✓
- d. Digestion ✓

33. Which of the following is true about hormonal receptors?

- a. Receptors become down-regulated by persistently high levels of a specific hormone ✓
- b. Receptors become up-regulated by persistently high levels of a specific hormone
- c. Steroid hormones do not require any receptors to exert their effect on DNA and initiate gene transcription  
Intracellular
- d. Steroid hormone receptors are located on the cellular membrane ✗

34. When red blood cells transport respiratory gases:

- a. Both oxygen and carbon dioxide bind to the ~~globin~~ portion of hemoglobin
- b. Carbon dioxide binds to the heme portion and oxygen binds to the globin portion of hemoglobin
- c. The main form of gas transport in the body is through the plasma
- d. Both oxygen and carbon dioxide bind to the heme portion of the hemoglobin
- e. Oxygen binds to the heme portion while carbon binds to the globin portion of hemoglobin

35. Together leukocytes and platelets comprise approximately \_\_\_\_ percent of total blood volume.

- a. 1
- b. 10
- c. 25
- d. 45
- e. 75

36. What is the proper sequence of blood flow through the circulatory system?

1- right atrium   2-left atrium   3- right ventricle   4- left ventricle   5-pulmonary artery  
6-pulmonary vein   7-lungs   8-systemic tissues   9-aorta   10-venae cavae

- a. 1-2-3-4-5-6-7-8-9-10
- b. 10-2-4-5-7-6-1-3-9-8
- c. 10-1-3-5-7-6-2-4-9-8
- d. 10-1-2-3-4-5-7-6-9-8

venae cavae → right atrium  
→ right ventricle  
→

37. The SA node is found in \_\_\_\_.

- a. The base of the right atrium
- b. The upper wall of the right atrium
- c. Each valve unit
- d. The tip of the heart

38. The function of the gap junction in cardiac muscle is to:

- a. Separate sarcomeres from each other ~~X~~
- b. Generate the appropriate neurotransmitters to regulate heart rate ~~X~~
- c. Prevent adjacent cells from separating during contraction ~~X~~
- d. Allow ions to pass from cell to cell, transmitting current across the entire heart

39. The external boundary between the atria and ventricles is the:

- a. Anterior interventricular sulcus
- b. Interventricular septum
- c. Interatrial septum
- d. Coronary sulcus
- e. Posterior interventricular sulcus

40. Choose the FALSE statement about the circumflex artery

- a. It is a branch of the left coronary artery ✓
- b. It provides the major blood supply to the right ventricle ✗
- c. It lies in a groove between the left atrium and left ventricle ✓
- d. Damage to this vessel would leave the left atrium with virtually no blood supply ✓



41. The mitral valve prevents blood backflow from:

- a. Aorta to left ventricle
- b. Left ventricle to left atrium
- c. Right ventricle to right atrium
- d. Right atrium to inferior and superior vena cava

42. The chamber of the heart that receives oxygen-rich blood from the pulmonary veins is the \_\_\_\_\_.

- a. Right atrium
- b. Left atrium
- c. Right ventricle
- d. Left ventricle

43. The source of oxygenated blood flowing to coronary capillaries in myocardium would be the \_\_\_\_\_.

- a. Coronary sinus (vein)
- b. Coronary arteries ✓
- c. Coronary veins
- d. Pulmonary veins

44. The term afterload refers to:

- a. End systolic volume
- b. End diastolic volume
- c. The pressure that must be overcome before the semilunar valves can open
- d. The pressure in the blood vessels necessary to cause the semilunar valves to close
- e. The maximum possible cardiac output above resting cardiac output

45. If the connections between the vagus nerve and the heart are severed, the

- a. Heart will beat more slowly
- b. Heart will stop beating
- c. Cardiac output will decrease
- d. The nodal fibers will depolarize more slowly
- e. None of the above

more depend on SV

46. Damage to the \_\_\_\_\_ is referred to as heart block.

- a. SA node
- b. AV valves
- c. Purkinje fibers
- d. AV node
- e. Ventricular node

vagus nerve cut

→ EDV ↓ (no enough time to refill)

47. Stroke Volume is the

- a. Amount of blood pumped by the heart per minute ~~X~~
- b. Difference between end-diastolic volume and end-systolic volume ✓
- c. Difference between the amount of blood pumped at rest and pumped at maximum output ~~X~~
- d. Amount of blood pumped from the atria into the ventricles ~~X~~
- e. A and B

48. Cardiac output is:

- a. The number of impulses fired by the SA node in one minute ~~X~~
- b. The amount of blood pumped out by one ventricle in one minute
- c. The amount of blood pumped out of the heart during each ventricular contraction ~~X~~
- d. The amount of blood filling each ventricle at the end of diastole ~~X~~
- e. The number of times the heart beats in one minute ~~X~~

49. The Frank Starling Law of the Heart implies a direction relationship between stroke volume and:

- a. End-systolic volume
- b. Mean arterial pressure
- c. Afterload pressure
- d. End-diastolic volume
- e. Pulse Pressure

pre-load

50. Which of the following statements is true?

- a. 80% of ventricular filling occurs during atrial systole ~~X~~ ?
- b. The effects of the sympathetic and parasympathetic nervous systems on the heart are in the same direction ~~X~~
- c. The second heart sound is created by the closing of the semilunar valves ✓
- d. The EDV can be increased by the sympathetic nervous system ✓
- e. Pressure in the left ventricle must exceed pressure in the pulmonary trunk before the left ventricle can eject blood ~~X~~  
aorta

