

chapter 1

Indicate the answer choice that best completes the statement or answers the question.

1. Which of the following prevents the bending or pinching of the umbilical cord that may stop blood flow to the infant?
 - a. Wharton's jelly
 - b. amnion
 - c. arteries
 - d. veins

2. Fetal lung maturity can be predicted by withdrawing a sample of amniotic fluid and comparing the level of phosphatidylglycerol (PG) to
 - a. sphingomyelin
 - b. lecithin
 - c. serum
 - d. ethanol

3. The first shunt encountered after blood enters the fetal abdominal cavity is the
 - a. ductus venosus
 - b. inferior vena cava
 - c. superior vena cava
 - d. foramen ovale

4. Which substance works to lower surface tension on the alveolar wall?
 - a. surfactant
 - b. mucus
 - c. serum
 - d. blood

5. At what point in development does blood begin to flow?
 - a. around the third week
 - b. two days after conception
 - c. immediately preceding delivery
 - d. immediately after delivery

6. By the fifth week of development, the single atrium is divided into two separate chambers by the
 - a. septum primum
 - b. pulmonary artery
 - c. truncus arteriosus
 - d. sinus venosus

7. At which stage of fetal lung development does the greatest amount of vascularization occur?
 - a. canalicular
 - b. pseudoglandular
 - c. embryonal
 - d. saccular

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8. At which of the following stages does the ovum enter the uterus?

- a. morula
- b. trophoblast
- c. blastocyst
- d. blastomeres

9. The foramen ovale is located between the right atrium and

- a. left atrium
- b. left ventricle
- c. right ventricle
- d. lungs

10. Which of the following carries the fresh blood from the placenta through the umbilical cord and into the fetus?

- a. umbilical vein
- b. umbilical artery
- c. hepatic portal vein
- d. aorta

11. Normally, fetal lung fluid moves steadily at what rate?

- a. 15 ml/hour
- b. 1 ml/hour
- c. 100 ml/hour
- d. 15 L/hour

12. The change from fetal circulation to adult circulation is called

- a. transition
- b. resuscitation
- c. pulmonary pressure
- d. coordination

13. Alveoli continue to

- a. increase in number for 8 years after birth
- b. increase in number for 2 years after birth
- c. increase in number for the entire lifetime
- d. maintain their count throughout childhood as the lungs are completely developed at birth

14. The central and peripheral nervous system arise from which germ layer?

- a. ectoderm
- b. mesoderm
- c. endoderm
- d. philoderm

15. Baroreceptors are stimulated by

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- a. stretch
- b. oxygen
- c. ventilation
- d. pH

16. At the end of 40 weeks gestation, how much fluid is present in the amnion?

- a. 1 liter
- b. 1 milliliter
- c. 10 liters
- d. 10 milliliters

17. Why must the lung fluid be completely evacuated from the lungs at birth?

- a. To allow for unhindered ventilation in the neonate
- b. To reduce the size of the infant passing through the birth canal
- c. To allow the infant to nurse
- d. To collapse the airways during birth

18. Pressures in the right, or venous system, compared to those in the left, or arterial system of the fetus are

- a. higher
- b. lower
- c. the same
- d. incomplete

19. The thicker, outer layer of the embryonic disc, or blastoderm, is the

- a. ectoderm
- b. endoderm
- c. mesoderm
- d. embryo

20. Secondary crests will eventually form

- a. true alveoli
- b. goblet cells
- c. pulmonary surfactant
- d. serous cells

21. As the radius of a bubble, or alveolus, decreases, the surface tension

- a. increases
- b. decreases
- c. stays the same
- d. fluctuates unpredictably

22. Which condition is characterized by the rapid deterioration in the respiratory status of a newborn following delivery?

- a. respiratory distress syndrome (RDS)

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- b. sudden acute respiratory syndrome (SARS)
- c. asthma
- d. pneumonia

23. Exposure to which of the following can lead to severe congenital malformations?

- a. radiation
- b. vitamins
- c. food coloring
- d. sugar

24. Chemoreceptors play a role in the regulation of

- a. ventilation
- b. hypertension
- c. blood vessel diameter
- d. cardiac contractility

25. Polyhydramnios indicates a problem with the

- a. swallowing mechanism of the fetus
- b. urinating mechanism of the fetus
- c. cardiovascular function of the fetus
- d. umbilical cord

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Answer Key

1. a
2. a
3. a
4. a
5. a
6. a
7. a
8. a
9. a
10. a
11. a
12. a
13. a
14. a
15. a
16. a
17. a
18. a
19. a
20. a
21. a
22. a
23. a
24. a

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25. a