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

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| 1. Which of the following prevents the bending or pinching of the umbilical cord that may stop blood flow to the infant?

|  |  |  |
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|   | a.  | Wharton’s jelly |
|   | b.  | amnion |
|   | c.  | arteries |
|   | d.  | veins |

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| 2. Fetal lung maturity can be predicted by withdrawing a sample of amniotic fluid and comparing the level of phosphatidylglycerol (PG) to

|  |  |  |
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|   | a.  | sphingomyelin |
|   | b.  | lecithin |
|   | c.  | serum |
|   | d.  | ethanol |

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| 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 |

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| 4. Which substance works to lower surface tension on the alveolar wall?

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|   | a.  | surfactant |
|   | b.  | mucus |
|   | c.  | serum |
|   | d.  | blood |

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| 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 |

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| 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 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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 |

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

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

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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 |

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| 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 |

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

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

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| 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 |

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

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

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| 15. Baroreceptors are stimulated by

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

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| 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 |

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| 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 |

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| 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 |

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

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

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| 20. Secondary crests will eventually form

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

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

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

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

|  |  |  |
| --- | --- | --- |
|   | a.  | respiratory distress syndrome (RDS) |
|   | b.  | sudden acute respiratory syndrome (SARS) |
|   | c.  | asthma |
|   | d.  | pneumonia |

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

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

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| 24. Chemoreceptors play a role in the regulation of

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

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| 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**

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| 1. a |

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| 2. a |

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| 3. a |

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| 4. a |

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| --- |
| 5. a |

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| --- |
| 6. a |

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| 7. a |

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| --- |
| 8. a |

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| --- |
| 9. a |

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| 10. a |

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| 11. a |

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| 12. a |

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| 13. a |

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| 14. a |

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| 15. a |

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| 16. a |

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| 17. a |

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| 18. a |

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| 19. a |

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| 20. a |

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| 21. a |

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| 22. a |

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| 23. a |

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| 24. a |

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| --- |
| 25. a |