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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?   |  |  |  | | --- | --- | --- | |  | 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   |  |  |  | | --- | --- | --- | |  | 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?   |  |  |  | | --- | --- | --- | |  | 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 | |

**Answer Key**

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| 2. a |

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