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KOLBY WALKER

Embryology, Exam 2, Spring 2009

1. The chorion only over the embryonic pole is the _____.
☒ a. chorion frondosum
b. chorionic plate
c. chorion laeve
d. chorionic cavity
2. The decidua over the implanted embryo is the _____.
a. decidua parietalis
☒ b. decidua capsularis
c. ~~decidua basalis~~
d. ~~amniochorionic membrane~~
3. Maternal twins are formed by _____.
a. ~~Two eggs fertilized by two different fathers.~~
☒ b. One fertilized egg splitting in the early blastocyst stage.
c. ~~Two ovulated eggs fertilized by two sperm~~
d. ~~Conjoined twins~~
4. A _____ is when a single problem is the cause of many anomalies.
a. malformation
b. disruption
c. deformation
☒ d. syndrome
5. A problem with which of the following is associated with babies with a high birth weight?
a. tyrosinase
b. tyrosine hydroxylase
☒ c. insulin
d. phenylalanine hydroxylase
- ☒ 6. Which of the following is a precursor for sclerotome development?
→ a. paraxial mesoderm
b. lateral plate mesoderm
☒ c. neural crest
d. intermediate mesoderm
7. The axial skeleton develops from which of the following tissue types?
☒ a. paraxial mesoderm
b. lateral plate mesoderm
c. neural crest
d. intermediate mesoderm

8. Which of the following would have Meckle's cartilage?
- skull cap
 - ~~cervical vertebrae~~
 - ☒ a bone of the face
 - spinal canal
9. Late in the fourth week when limb buds appear, a crest of thickened tissue forms at their distal parts. Which of the following is true concerning the function of these *apical ectodermal ridges*?
- The AER form in the lower limb buds before the upper limb buds.
 - ☒ They allow cells beneath them to proliferate and lengthen the limb bud.
 - The AER induce the formation of skeletal cartilage in the mesoderm.
 - The *progress zones* are distal to the AER.
10. Which of the following statements is true?
- Lower limb buds appear before upper limb buds.
 - The upper limbs rotate 90° medially and the lower limbs rotate 90° laterally
 - Joints of the limbs are formed between different pieces of cartilage from proximal to distal. That is, scapula, humeral, ulnar cartilages are separate made.
 - ☒ The upper limbs rotate 90° laterally and the lower limbs rotate 90° medially.
11. The _____ are split into cranial and caudal halves, merge, and then form vertebrae.
- myotome
 - ☒ sclerotome
 - dermatome
 - somite
12. Incomplete closure of the _____ will result in _____.
- ☒ ~~neural arch / spina bifida occulta~~
 - neural arch / ~~Klippel-Feil syndrome~~
 - centrum / ~~spina bifida occulta~~
 - centrum / cleidocranial dysplasia
13. The cells of the CAUDAL half of the structure correctly chosen in question #12 will increase in density and migrate into the CRANIAL half of the next structure below to form the centrum.
- ~~caudal / caudal~~
 - ~~cranial / cranial~~
 - cranial / caudal
 - ☒ caudal / cranial



14. The ribs develop from mesenchymal cells of their corresponding _____ and the nucleus pulposus is the remains of the notochord.
- a. ~~notochord / vertebrae~~
 - b. ~~sternal segment / notochord~~
 - c. vertebrae / notochord
 - d. ~~notochord / sternal segment~~
15. Almost all skeletal muscle of the body derived from which of the following?
- a. paraxial mesoderm
 - b. splanchnic mesoderm
 - c. intermediate mesoderm
 - d. local mesoderm
16. Which of the following reasons describes why adult muscle cells are multinucleated?
- a. ~~Myoblasts are initially multinucleated.~~
 - b. Myoblasts fuse together to form myotubes.
 - c. ~~Myotubes only replicate their nuclei and not the cytoplasm.~~
 - d. Myotubes fuse to form myoblasts. *blasts fuse - cells*
17. The epimere will give rise to which for the following muscle groups.
- a. Extensors of the vertebral column.
 - b. Muscle of the gut.
 - c. Muscle of the body wall and limbs.
 - d. The arrector pili.
18. Which of the following is innervated by dorsal primary rami?
- a. pectoralis
 - b. scalene
 - c. erector spinae
 - d. ~~diaphragm~~
19. Accessory cells that help repair muscle damage are called _____ cells.
- a. germ
 - b. Purkinje
 - c. neural crest
 - d. satellite
20. Vascular smooth muscle arises from _____.
- a. sclerotomes
 - b. dermatomes
 - c. local mesoderm
 - d. neural crest cells

21. The _____ extends from about the mid colon to the rectum.
- a. foregut
 - b. midgut
 - ☒ c. hindgut
 - c. vitelline gut
22. The falciform ligament is derived from the _____.
- a. ventral mesentery
 - ~~b. buccopharyngeal membrane~~
 - c. dorsal mesentery
 - d. ~~cloacal membrane~~
23. Which will form much of the central tendon of the diaphragm?
- a. visceral layers of serous membranes
 - ☒ b. septum transversum
 - c. parietal layers of serous membranes
 - d. ventral mesocardium
24. The fibrous component of the pericardium is formed by the _____.
- a. pleuroperitoneal
 - b. body wall mesoderm
 - c. septum transversum
 - ☒ d. pleuropericardial folds
- ~~25.~~ Herniation of abdominal viscera that pass through the umbilical ring and are covered by amnion or peritoneal membranes is called _____.
- a. ectopia cordis
 - ~~b. omphalocele~~
 - c. gastroschisis
 - ☒ d. diaphragmatic hernia