

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~~

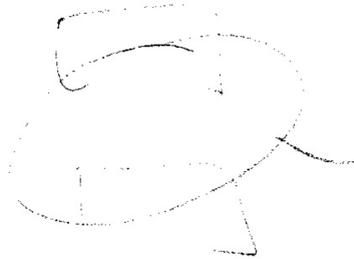
4. A _____ is when a single problem is the cause of many anomalies.
a. malformation
b. disruption
c. deformation
 d. syndrome

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