

Multiple Choice

1. Which component(s) of the cleaving embryo give(s) rise to tissues of the embryo itself?
 - A. Corona radiata
 - B. Trophoblast
 - C. Zona pellucida
 - D. Inner cell mass
 - E. All of the above

ANS: D

2. What is the correct cell lineage leading to the formation of the syncytiotrophoblast?
 - A. Blastomere – inner cell mass – hypoblast – trophoblast – syncytiotrophoblast
 - B. Inner cell mass – epiblast – cytotrophoblast – syncytiotrophoblast
 - C. Blastomere – trophoblast – cytotrophoblast – syncytiotrophoblast
 - D. Blastomere – inner cell mass – epiblast – trophoblast – syncytiotrophoblast
 - E. Blastomere – epiblast – trophoblast – syncytiotrophoblast

ANS: C

3. What is the most common condition associated with spontaneously aborted embryos?
 - A. Maternal imprinting
 - B. Lithopedion
 - C. Ectopic pregnancy
 - D. Chromosomal abnormalities
 - E. Lack of X-chromosome inactivation

ANS: D

4. Which tissue from the implanting embryo directly interfaces with the endometrial connective tissue?
 - A. Inner cell mass
 - B. Corona radiata
 - C. Extraembryonic mesoderm
 - D. Epiblast
 - E. Syncytiotrophoblast

ANS: E

5. Cells of which of the following are totipotent (can form any part of the embryonic body)?
- A. Inner cell mass
 - B. Cytotrophoblast
 - C. Amniotic ectoderm
 - D. Extraembryonic mesoderm
 - E. Yolk sac endoderm

ANS: A

6. Which of the following is not a function of the zona pellucida?
- A. Preventing premature implantation
 - B. Containing specific sperm receptors
 - C. Keeping blastomeres of the embryo and its surrounding environment
 - D. Serving as a filter between the embryo and its surrounding environment
 - E. Aiding in the penetration of the endometrial epithelium

ANS: E

7. Which of the following conditions results from inappropriate paternal imprinting?
- A. Conjoined twins
 - B. Parasitic twin
 - C. Hydatidiform mole
 - D. Tetraparental mouse
 - E. Fraternal twins

ANS: C

8. A tubal pregnancy can result from:
- A. Pelvic inflammatory disease
 - B. Scarring from a surgical procedure to a uterine tube
 - C. An anatomical malformation of a uterine tube
 - D. All of the above
 - E. None of the above

ANS: D

9. All of the following structures arise from the inner cell mass except:
- A. Epiblast
 - B. Hypoblast
 - C. Cytotrophoblast
 - D. Parietal endoderm

ANS: C

10. When the cleaving embryo implants in the uterine lining, which tissue makes direct contact with the maternal tissues?
- A. Inner cell mass
 - B. Zona pellucida
 - C. Hypoblast
 - D. Extraembryonic mesoderm
 - E. None of the above

ANS: E

11. Identical twinning is made possible by what embryonic process?
- A. Induction
 - B. Paternal imprinting
 - C. X-chromosome inactivation
 - D. Regulation
 - E. Maternal imprinting

ANS: D

12. In the construction of a tetraparental mouse, what property of the cleaving embryo allows the formation of a single mouse from two separate embryos?
- A. Induction
 - B. Bateson's rule
 - C. Regulation
 - D. Differentiation
 - E. Restriction

ANS: C

13. In early development, X inactivation first occurs in what tissue?
- A. Inner cell mass
 - B. Primitive endoderm
 - C. Notochord
 - D. Hensen's node
 - E. Trophectoderm

ANS: E

14. The fixation of the left-right asymmetry is initiated by the unequal distribution of molecules at the _____.
- A. Prechordal plate
 - B. Neural plate
 - C. Primitive node
 - D. Notochord
 - E. None of the above

ANS: C

15. The most common site for an ectopic pregnancy is the _____.
- A. Uterus
 - B. Cervix
 - C. Abdominal cavity
 - D. Uterine tube
 - E. Ovary

ANS: D

16. Which of the following is due to faulty parental imprinting?
- A. Ectopic pregnancy
 - B. Placenta previa
 - C. Hydatidiform mole
 - D. Conjoined twins
 - E. Situs inversus

ANS: C

17. Embryonic stem cells are derived from the _____.
- A. Corona radiata
 - B. Inner cell mass
 - C. Cytotrophoblast
 - D. Syncytiotrophoblast
 - E. None of the above

ANS: B

18. Successful implantation depends on:
- A. Dissolution of the zona pellucida
 - B. Production of syncytiotrophoblast
 - C. Cell adhesion
 - D. All of the above
 - E. None of the above

ANS: D