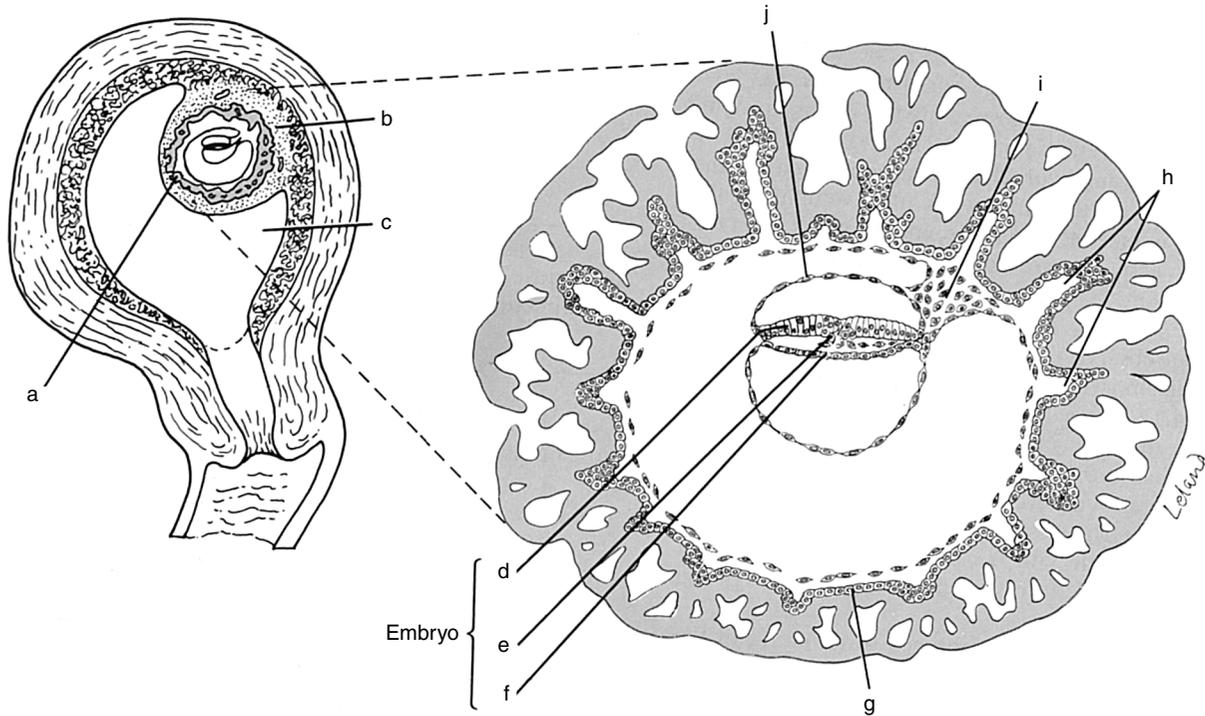




6. Using the letters on the diagram, correctly identify each of the following maternal or embryonic structures.

- |                           |                                |                                   |                               |
|---------------------------|--------------------------------|-----------------------------------|-------------------------------|
| <u>j</u> _____ amnion     | <u>g</u> _____ chorion         | <u>b</u> _____ decidua basalis    | <u>f</u> _____ endoderm       |
| <u>i</u> _____ body stalk | <u>h</u> _____ chorionic villi | <u>a</u> _____ decidua capsularis | <u>e</u> _____ mesoderm       |
|                           |                                | <u>d</u> _____ ectoderm           | <u>c</u> _____ uterine cavity |



7. Explain the importance of gastrulation. It involves the migration, movement, and rearrangement of embryonic cells, so that a three-layer embryo (three primary germ layers) is formed.
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8. What is the function of the amnion and the amniotic fluid? The amnion is a protective, fluid-filled sac that surrounds the embryo. The fluid "buffer" protects the embryo from physical trauma and prevents adhesion formation.
- 
9. Describe the process of implantation, noting the role of the trophoblast cells. The trophoblast cells overlying the inner cell mass adhere to the endometrium. The trophoblast cells then secrete enzymes that erode the endometrial lining to reach the vascular supply beneath it.
- 
10. How many days after fertilization is implantation generally completed? 7 What event in the female menstrual cycle ordinarily occurs just about this time if implantation does not occur? Menses, because this is usually the 14th day after ovulation.
-



What embryonic membranes has the placenta more or less "put out of business"? Yolk sac and allantois.

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18. When does the human embryo come to be called a fetus? Ninth week of development.

19. What is the usual and most desirable fetal position in utero? Head down.

Why is this the most desirable position? The largest fetal dimension is the skull. Therefore, if the skull is used as a wedge, the rest of the body is delivered easily. Also, if difficulties are encountered, the baby can be suctioned and given oxygen even before delivery is completed.

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## Gross and Microscopic Anatomy of the Placenta

20. Describe fully the gross structure of the human placenta as observed in the laboratory. Smooth on the side from which the umbilical cord issues. Torn, rough, and bloody on the side that was united with maternal tissues. Blood-rich.

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21. What is the tissue origin of the placenta: fetal, maternal, or both? Both

22. What are the placental barriers that must be crossed to exchange materials? The membranes of the villi and capillary walls of the fetal vascular supply.

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