**Quiz #3 – Practice Questions**

1. The early stages of cleavage are characterized by:

A. formation of a hollow ball of cells
B. formation of the zona pellucida
C. increase in the size of the cells in the zygote
D. increase in the number of cells in the zygote
E. none of the above

### During the implantation, the trophoblast differentiates intoA. syncytiotrophoblastB. epiblastC. cytotrophoblastD. yolk sac

### E. Both A and C

### The first two intraembryonic germ layers (from the embryoblast) to differentiate are theA. ectoderm and hypoblastB. epiblast and hypoblastC. ectoderm and endodermD. ectoderm and mesoderm

### The bilaminar germ discA. consists of epiblast and mesoblastB. is derived from the outer cells of the morulaC. forms the embryo properD. becomes the placenta

### The primitive streak first appears at the end of the \_\_\_\_\_ week.A. firstB. secondC. thirdD. fourthE. fifth

### Cells from the primitive streak DO NOT becomeA. endodermB. mesodermC. paraxial mesodermD. notocord

### The primitive streakA. is derived from the outer cells of the morulaB. is formed during the fourth week of developmentC. becomes the mouth D. is the site of the invagination of epiblast cells which form the mesoderm

### What is the resulting form derived from the process of transverse folding? What new structures are generated? You may draw a diagram.

### What tissue layer are somites derived from? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_What structure do they give rise to? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

### In mammals, the primary role of the yolk sac is to make \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

### The syncytiotrophoblast penetrates the endometrium and establishes contact with the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Eventually this connection will give rise to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

### The notocord becomes

### the vertebrae

### the somites

### the nerve cord

### the cartilage disks between vertebrae

### the nueral tube

### The chorion is the membrane that forms the placenta. It is composed of tissues from

### The cytotrophoblast, embryoblast, and mesoderm

### The syncytiotrophoblast, cytotrophoblast and endometrium

### The endometrium, cytotrophoblast, and epiblast

### The epibast, hypoblast, and yolk sac

### characterize the concept of homology and explain *why* the structures below are homologous.

### TetrapodLimb.jpg

### 15. At what day, approximately, does the embryo start producing a heartbeat?