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MATRIC NUMBER: 18/MHS01/174

DEPARTMENT: MEDICINE AND SURGERY

COURSE TITLE: EMBRYOLOGY

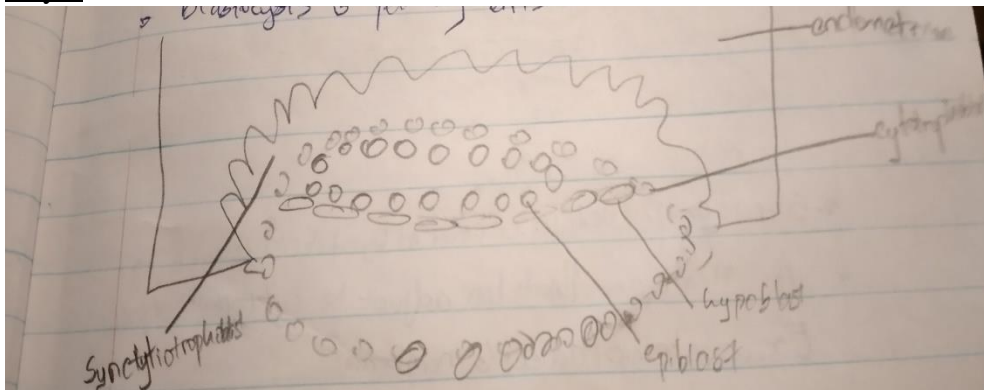
ASSIGNMENT

1. Discuss the second week of Development.

The following are the events that take place in the second week of development;

- ❖ Completion of Implantation
- ❖ Formation of a bilaminar germ disc
- ❖ Development of extra embryonic structures.

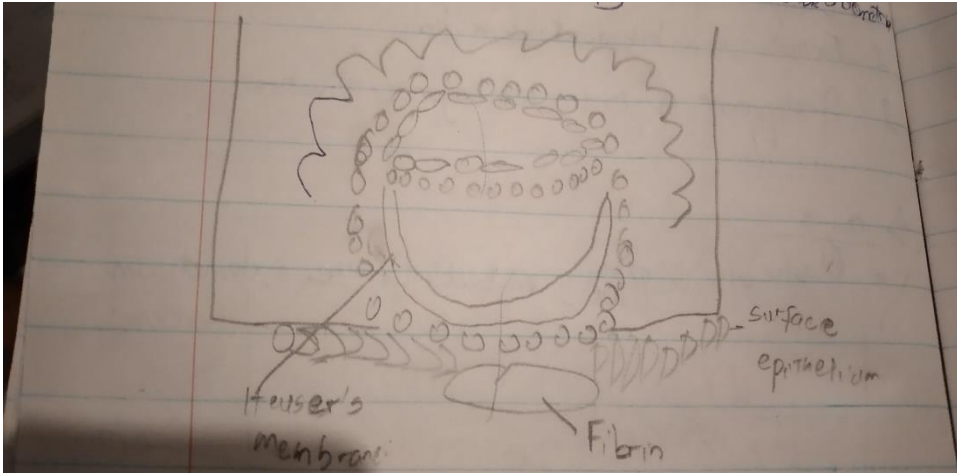
➤ Day 8



- . Blastocysts is partially embedded in the endometrium
- . Syncytiotrophoblast will continue to erode the endometrium
- . The cells of the cytotrophoblast will continue to divide and migrate into the region of the syncytiotrophoblast
- . The embryoblast will differentiate into two different types; hypoblast (cuboidal cells) and epiblast (columnar cells)
- . The adjacent cells of the epiblast to the cytotrophoblast is called Amnioblast. They surround a cavity called Amniotic cavity

. The other side of the epiblast and the hypoblast give rise to the Bilaminar germ disc.

➤ Day 9



. The blastocyst is deeply embedded in the endometrium

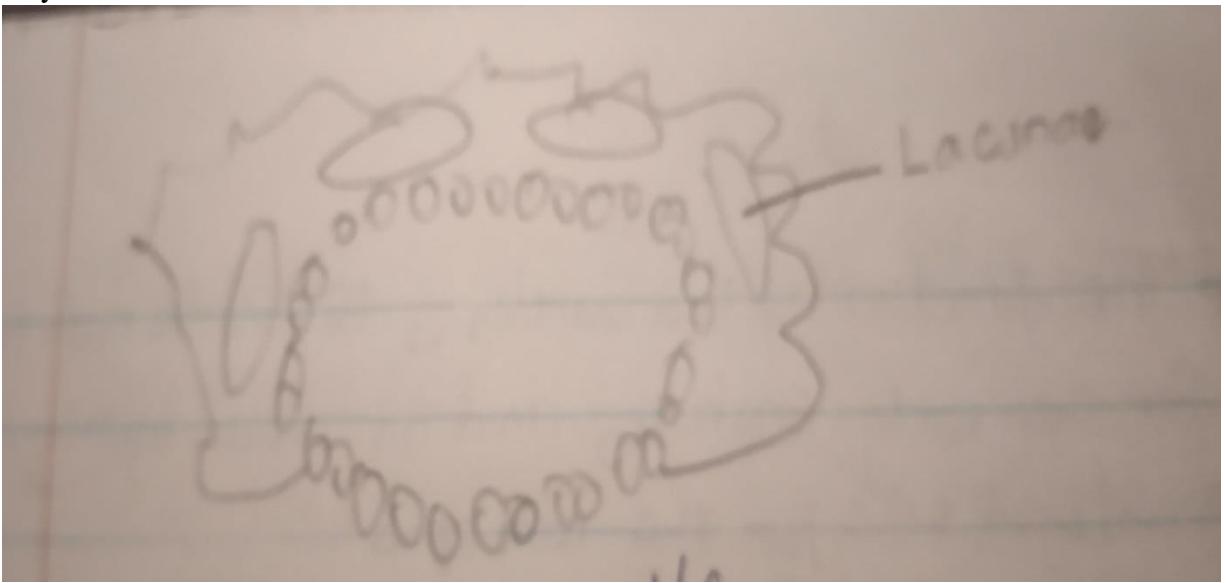
. Surface epithelium is covered by fibrin coagulants

. A membrane that lies adjacent to the cytotrophoblast called Exocoelomic/ Heuser's membrane

. The cavity between Heuser's membrane and the hypoblast is called exocoelomic cavity/ primary yolk sac/ primary umbilical vesicle.

. Vacuoles are developed in the syncytiotrophoblast called Lacunae and they get enlarged to form trophoblastic Lacunae.

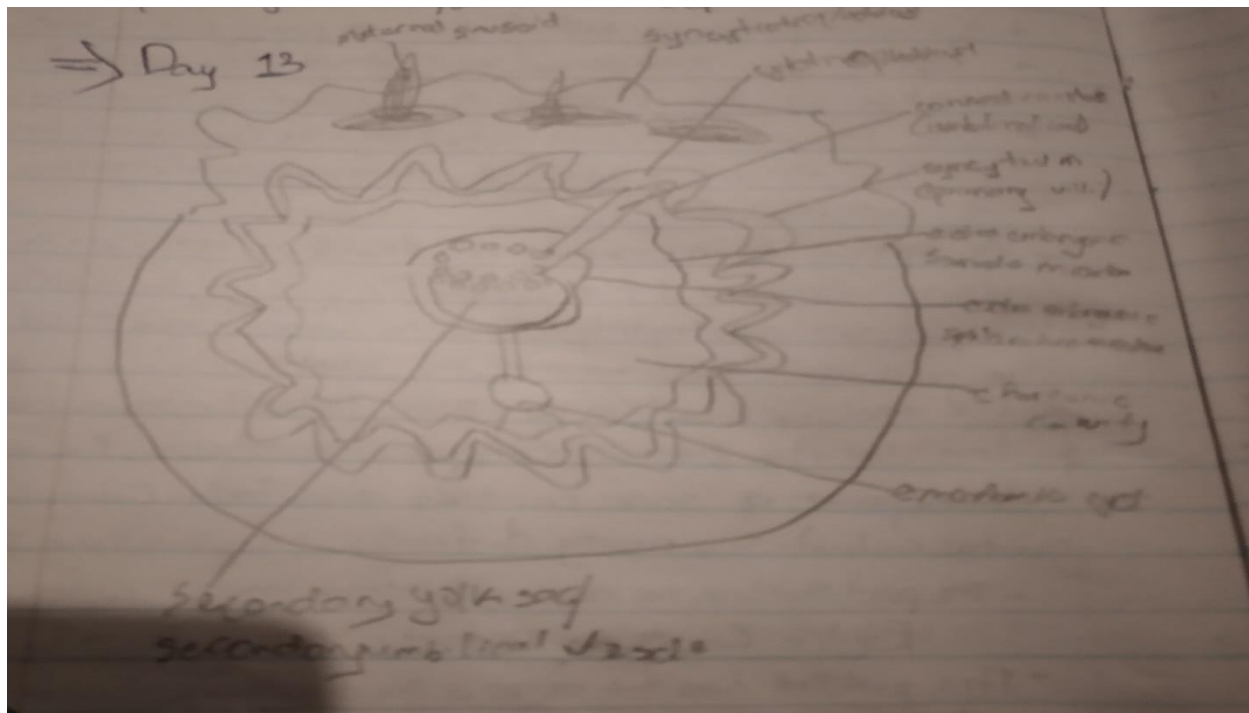
➤ Day 11-12



. Blastocyst is completely embedded in the endometrium

- . Syncytiotrophoblast will continue to erode the endometrium
- . Ruptures of capillaries [called sinusoid] causing the spillage of blood from the mother to the embryo
- . The sinusoid communicates with the trophoblastic lacunae
- . At this stage, a primordial utero-placental circulation is established
- . A space of mesoderm develops between the cytotrophoblast and exocoelomic membrane and between the cytotrophoblast and the amnioblast except at the point where there is connecting stalk
- . The space of mesoderm is called Extra Embryonic mesoderm
- . Inside the Extra Embryonic mesoderm, the development of some cavity called Extra Embryonic cavity occurs. The cavity divides the mesoderm into two part; the part that lines the region of the trophoblast called the Extra Embryonic Somatic mesoderm and the part that lines the region of the amnioblast and the exocoelomic membrane called the Extra Embryonic Splanchnic Mesoderm
- . Desidual reaction is the accumulation of glycogen and lipids in the endometrium that causes swelling
- . The function of this reaction is to provide nutrition for the early embryo and an immunologically privileged sites for the conceptus

➤ Day 13



- . They acquire syncytium that gives off finger like processes called primary villi
- . The connecting stalk is what later becomes the umbilical cords
- . The extra embryonic cavity enlarges and forms the chorionic cavity.