

Unit II – Problem 1 – Embryology: Embryonic and Fetal Development



- Postconception Week 1:

- The most important event is implantation of the blastocyst in the endometrium. The outer layer of the blastocyst will become the trophoblast or placenta while the inner cell mass will become the embryo.
- Fertilization occurs in the distal part of fallopian tube (ampulla).
- The egg is capable of being fertilized for 12-24 hours.
- The sperm is capable of fertilizing for 24-48 hours.

- Postconception Week 2:

- Characterized by the development of bilaminar germ disk with epiblast and hypoblast layers.
- Another significant event is the invasion of the maternal sinusoids by syncytiotrophoblast. Because β -hCG is produced in the syncytiotrophoblast, this now allows β -hCG to enter the maternal blood stream. β -hCG pregnancy test now can be positive for the first time.

- Postconception Week 3:

- Characterized by the formation of trilaminar disk with ectoderm, mesoderm and endoderm layers. These layers will give rise to the major organs and organ systems.

- Postconception Weeks 4-8:

- During this time, the major organs and organ systems are being formed. This is the period of major teratogenic risk.

