

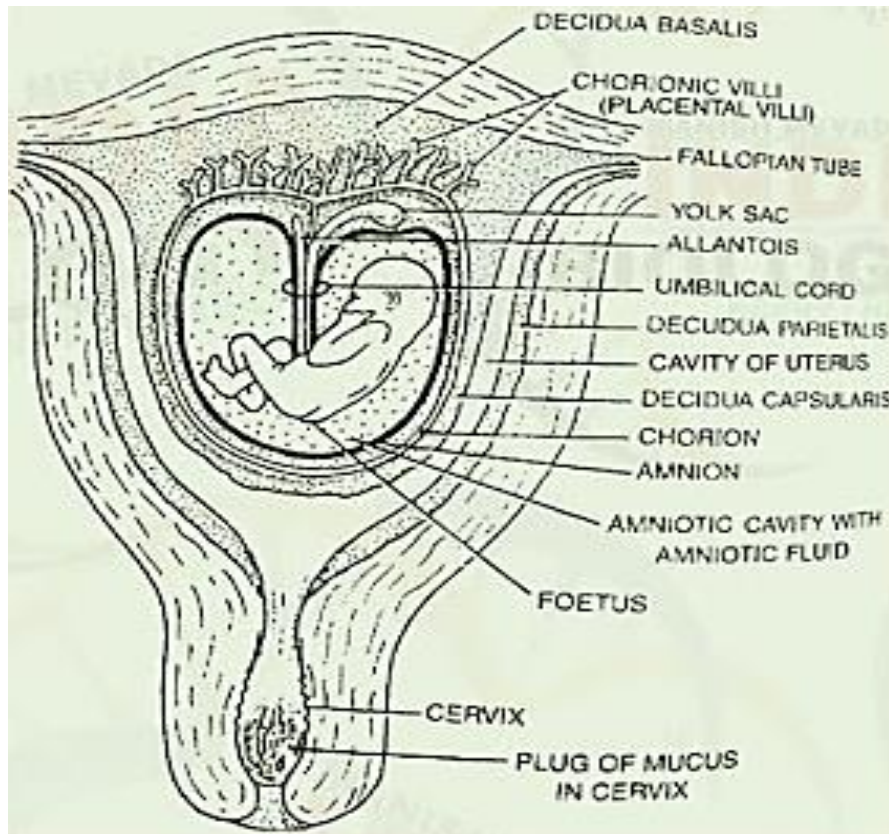
Que: Name the hormones whose level rises in maternal blood during pregnancy and are essential for supporting foetal growth .

Ans: Estrogen, Progesterone, cortisol, prolactin, thyroxine etc.

Placenta (fetomaternal organ)- Foetal portion -Villous Chorion.

Maternal portion- Decidua basalis (Endometrium of Uterus)

- Life span of ovum in female genital tract is 24 hours.
- During pregnancy uterus is maintained by progesterone secreted by corpus luteum.



- **Gastrula:** Stage of Embryo (after implantation) where, the inner cell mass (embryo) differentiates into three **Germ layers** that give rise to all tissues (organs) in adults.
- Germ Layers- - **Ectoderm** (outer layer) and an – **endoderm** (inner layer) & **Mesoderm** (middle layer develop between ectoderm & endoderm).
- After gastrulation extra embryonic membranes are formed
Amnion- protect the developing embryo against mechanical shock
Chorion- helps in the exchange of nutrients, gases, and wastes between the embryo and the mother's body.
Allantois- collect liquid waste from the embryo & gases exchange.
Yolk sac- provides nourishment (food) to embryo.

Que: What are Stem Cells?

Ans: These are cells of inner cell mass which have the potency to give rise to all the tissues and organs.

Gestation- Period Time between conception and birth. It is 280 days/9 months/40 weeks (from first day of the last menstrual cycle).

The first trimester period

- In human, after **one month** of pregnancy the **embryo's heart is formed**.
- By the end of **2nd month** limbs and digits are formed.
- By the end of **12 weeks (3 months)** **external genital** and **major organs are well developed**.

The second trimester period.

- The **first movement** of foetus is observed in **5 months**.
- By the end of 24 weeks body is covered with fine hair, eye lids and eyeless are formed.

Third trimester period.

- At the end of 9 months foetus is fully developed.

PARTURITION AND LACTATION

Parturition-the process of delivery of fully developed foetus is called parturition.

- Signals for parturition originate from the fully developed foetus and placenta inducing mild uterine contractions called **Foetal ejection reflex**
- It triggers the release of oxytocin from maternal pituitary.

Lactation- mammary glands of female, start producing milk, to the end of pregnancy.

The milk produced during the initial few days of lactation is called **colostrum**, which contain several antibodies (IgA specially) providing passive immunity to new born.

Que: What do the doctors inject to induce Labour?

Ans: Oxytocin injection is used to begin or improve contractions during labor.

Que: What is the gestation period of elephant dog and cat?

Ans: Gestation period- Dog: 58-68 days
 Elephant: 18 - 22 months
 Cat: 58-67 days.

Que: What is Mucus Plug? What is its function?

Ans: It is a thick piece of mucus that blocks the opening of your cervix during pregnancy. It forms a seal to prevent bacteria and infection from getting into uterus and reaching baby.