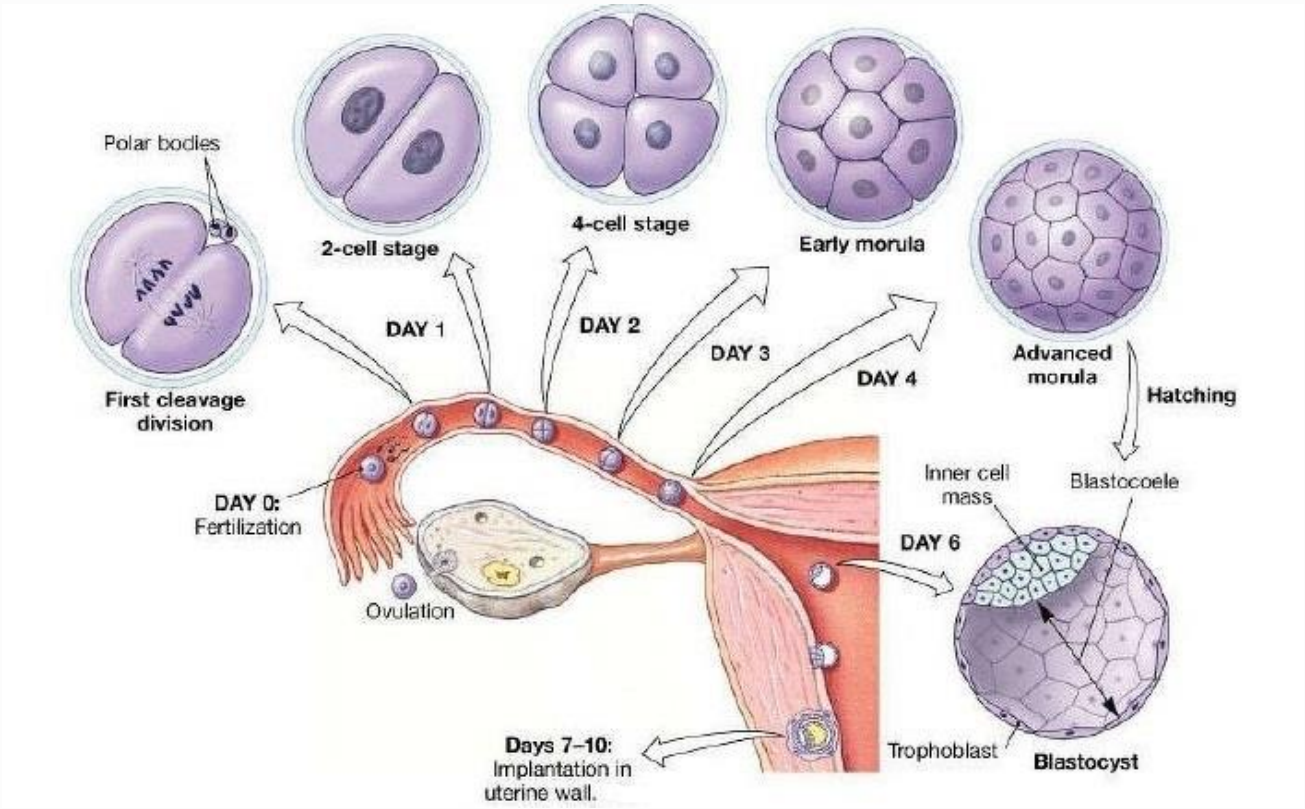
- As the zygote moves towards the uterus, the mitotic division starts and form **cleavage** to change into 2, 4,8,16 celled **blastomeres**.
- During Cleavage Size of embryo and total Cell Mass remain constant as G1 & G2 phase are absent.
- No. of cells (blastomeres) increases, size of cell (blastomere) decreases and nuclear cytoplasmic ratio increases
- The blastomeres with 8 cell called Early Morula & with 16 cells is called Late Morula.



- Morula divide to change into **Blastocysts**- at this stage implantation takes place.
- Here blastomeres are arranged into an outer layer called **trophoblast** and an inner group of cells attached to trophoblast called **Inner cell mass.**
- Here Zona Pellucida degrade with the help of lysin enzyme.
- Trophoblast attach with endometrium and uterine cell divide rapidly and blastocyst embedded into uterus termed as **Implantation** that leads to pregnancy.

Pregnancy and embryonic development

- The finger-like projections develops on trophoblast after implantation called **chronic villi**.
- Chronic villi with uterine wall forms **placenta**.
- Placenta attached to foetus with an **umbilical cord** that transport food and oxygen to embryo and excrete waste.

Que: What is the function of placenta?
Ans: It provides oxygen and nutrients to a growing baby.
Removes waste products from the baby's blood.
Act as a barrier between embryo and maternal body.
Also act as endocrine gland & release various hormones.

Que: Name the hormones released by placenta and their functions.
Ans: The following hormones are released by placenta:

- **HCG (human chorionic gonadotropin)-** Maintain Corpus Luteum

- **HPL (human placental lactogen)-** Develop Mammary Gland
- **Relaxin –** Dilate Cervix during Parturition
- **Progesterone –** Maintain Pregnancy
- **Estrogen-** Prepares the uterus for labour.

Ques: Name the hormones produced in woman only during pregnancy by Placenta?
Ans: HCG, HPL, Relaxin.