Hello students, welcome to the program. Bachelor of Arts

First year Subject Psychology Semester one Paper titled

Child Psychology.

I'm Assistant Professor, Maria Fatima D'Costa and I will be

presenting to you on the Topic Prenatal development

and Stages from Unit 1 Introduction an early

beginning of life module number 3.

The outline of the presentation is Prenatal development.

Germinal period, Embryonic period and the Fetal period.

At the end of today's class,you will be able to describe

the changes that occur during prenatal development, as well

as outline the stages of development.

So let's begin with what is prenatal development. Prenatal

development can be understood as a process by which a baby

develops inside the mother's

womb. It begins with fertilization and it ends with

birth. Fertilization happens at conception when a single

sperm cell from the Male unites with an Ovum or the

egg in the female.

Prenatal development is divided into 3 periods. These

include the germinal period, the embryonic period, and the

fetal period. The duration of the prenatal development is

about 38 to 40 weeks.

Prenatal development is further organized into 3

equal trimesters. Kindly note that these trimesters do not

correspond to the three stages of development.

So now we will look at each of the stages of prenatal

development in a little more detail. The fastest period is the germinal

period. This period begins at conception and it lasts up to

two weeks. It includes the creation of the fertilized egg,

which is now called as the

zygote. During this period, there is rapid cell division, and this

process is called mitosis.

A mass of cells is formed called as the blastocyst, which

is divided into the inner and outer layer of cells.

The inner mass of cells is the embryonic disc. This goes on

further to develop into the

embryo. The outer layer of cells that covers the embryo

is called as a trophoblast and the important function of the

trophoblast is to provide both nutrition and support for the

growing embryo.

An important function that happens during this stage

is implantation. That is,the process by which the

zygote attaches itself to the uterine wall, and this

procedure occurs within 15 days after conception.

Now we look at the Embryonic Period. This period begins from the

third week after conception and lasts up to 8 weeks.

The mass of cells is now called

an embryo. Cell division, which began in the germinal period,

now begins to intensify and there are three layers of

cells that are formed. These are the endoderm, the mesoderm

and the ectoderm.

The endoderm is the inner layer of cells with changes into

the digestive and respiratory systems, while the mesoderm is a

middle layer of cells which becomes the circulatory system,

the bones the muscles excrete and reproductive system, while

the ectoderm, which is the outermost layer of cells changes

into the nervous system sensory receptors and skin parts.

Important life support systems are also formed during this

period. These include the amnion, the umbilical cord

and the placenta.

So what is the amnion? It is a bag which contains amniotic

fluid in which the embryo

floats. It is shock proof and it controls both the

temperature and humidity of the babies environment.

The umbilical cord consists of two arteries and one

vein, which connects the baby to the Placenta.

While the Placenta is a group of tissues containing both mother

and babies intertwined blood

vessels. The function of the Placenta is to provide oxygen

and nutrients to the growing baby. It also removes waste

products from the babies blood.

In this figure you will see the three life support systems. That

is, the placenta, the umbilical cord, and the amniotic sac.

Another important process that occurs during this period is

called organogenesis. It is the beginning of the

appearance of the organs.

The eyes, heart, arms and legs as well as the face and intestinal

tract begin to form.

The embryo now is approximately 1 inch in length and it weighs

about four grams. It can move and respond to touch.

It is during this period that the organism is considered to

be most vulnerable to damage on exposure to any harmful

substances.

We now look at the last period of development and that is the fetal period. This period begins at the 9th week after conception and it lasts until birth.

The fetus now is about 3 inches long and it weighs about 28 grams. There is rapid growth and change during this time and the organism is now called the fetus. The fetus is very active and therefore it is during this time that the mother can now begin to feel the movement of the baby.

External genitals can be identified which leads to sex differentiation. Reflexes also begin to develop like the sucking reflex, swallowing and hiccups. The fetus shows a particular preference for a position in the womb.

Fat layers under the skin begin to develop. An important function of these fat layers is to provide insulation and help the baby regulate body temperature after birth.

Kindly note this is the longest period of prenatal development.

The baby has a first chance of survival outside the womb, and so it is called as the age of viability, which happens at about 24 weeks.

The fetus continues to grow in length and wait until it reaches

full term delivery.

We have now come to the end of today's presentation. You

can refer to the books on Child development by J.W.

Santrock and Child development by L.E. Berk

for future references. Thankyou.