

•**Birth canal:** The cervical canal along with the vagina forms the birth canal which helps during the birth of the baby.

External Female Genitalia:

The main external female genitalia of the female reproductive system consist of: mons pubis, labia majora, labia minora, hymen and clitoris.

Mons pubis: It is a cushion of fatty tissue which is covered by hair and skin.

Labia majora: They are fleshy folds of tissue that enclose and protect the external reproductive organs. It extends from the mons pubis and covers the vaginal opening.

Labia minora: They are the paired folds of tissue that lies just inside the labia majora

Hymen: Hymen is a thin membrane that surrounds the opening of the vagina. It is often torn during the first intercourse or coitus or it can also be broken by participation in some sports like horseback riding, cycling, etc. Apart from this a sudden fall or jolt, insertion of a vaginal tampon is also the reason for broken hymen. In some women the hymen can continue even after coitus so it shows that the presence or absence of hymen is not a reliable indication of virginity or sexual experience.

Clitoris: It is a small, sensitive, finger-like projection that is present at the junction of the labia minora above the urethral opening.

Mammary Glands:

All female mammals possess a pair of functional mammary glands.

- The breasts are paired structures that are made up of glandular tissue and variable amounts of fats.
- Each mammary gland consists of 15-20 mammary lobes.
- These mammary lobes contain clusters of cells known as alveoli.
- The secretion of milk takes place by the cells of alveoli.
- This secreted milk is stored in the lumen or cavities of the alveoli which open into the mammary tubules.
- These mammary tubules of each lobe join to form a mammary duct.

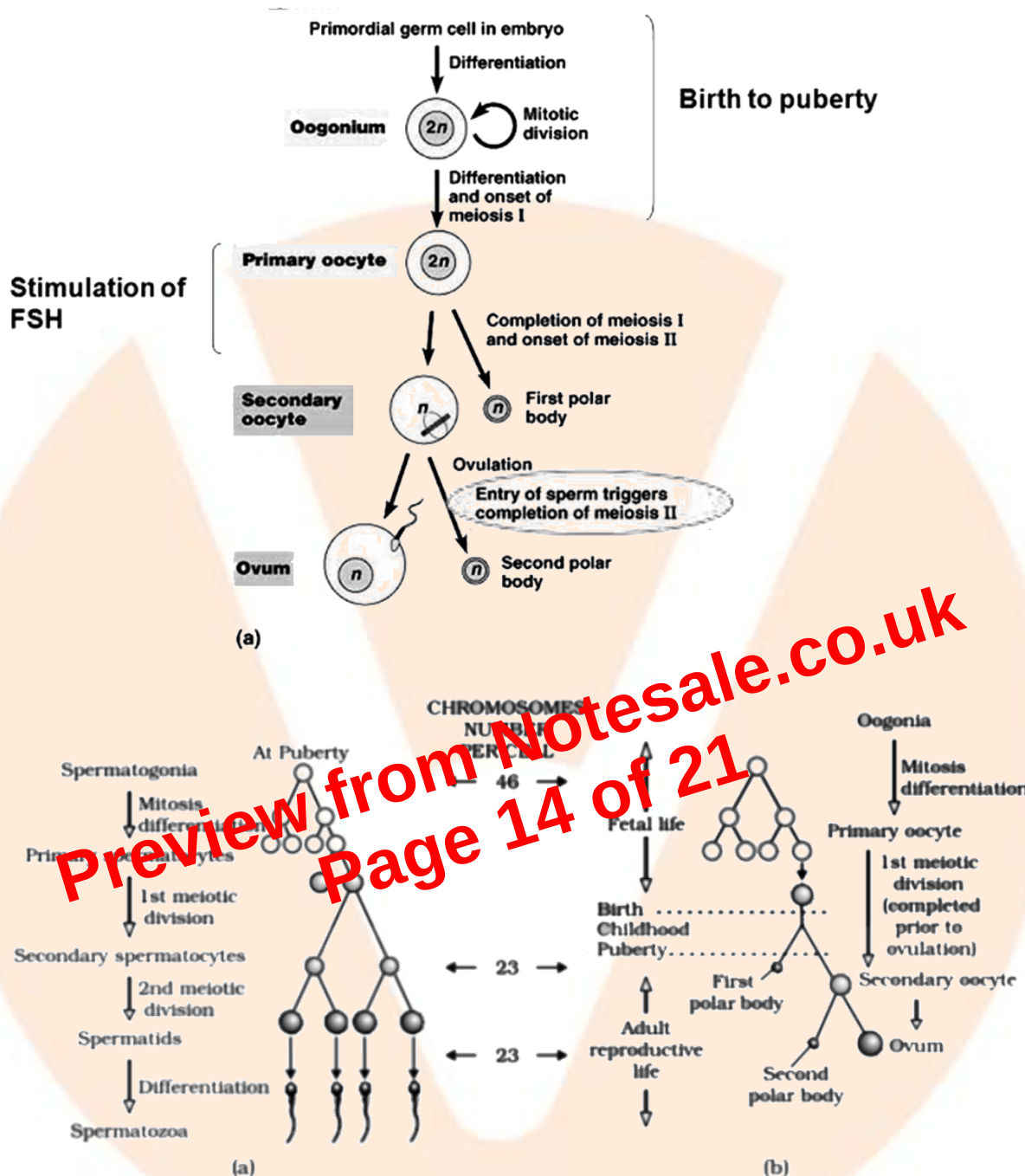
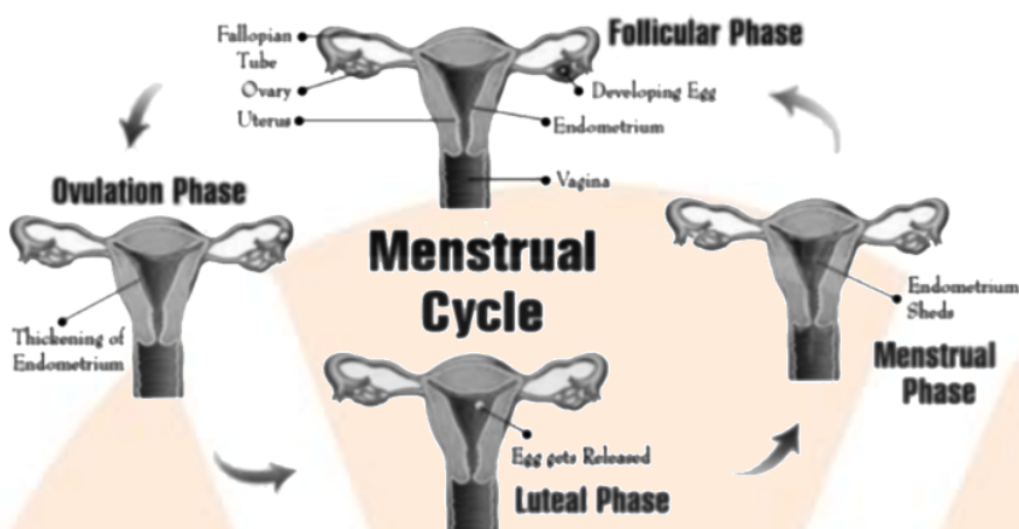


Figure 3.8 Schematic representation of (a) Spermatogenesis; (b) Oogenesis

3.4: Menstrual Cycle:

•**Menstrual Cycle:** This is the reproductive cycle that starts from one menstruation till the next one. It mainly occurs in female primates like monkeys, apes and human beings. The cycle repeats at an interval of 28-35 days and



3.5: Fertilisation and Implantation:

•**Insemination:** It is the process in which semen is released into the vagina by the penis during coitus or copulation.

•The motile male gamete or sperm swims rapidly through the cervix, enters into the uterus and finally reaches the site of fertilization which is in the ampullary region of the fallopian tube.

•The ovum which is released by the ovary is also transferred to the ampullary region of the fallopian tube.

•Fertilization takes place in the fallopian tube only when the ovum and sperms are simultaneously transferred into the site of fertilization.

•**Fertilization:** It is the fusion of the haploid male gamete or sperm and the haploid female gamete or egg. At the time of fertilization, the sperm makes changes in the zona pellucida layer of the ovum to block the entry of other sperms. This ensures that only one sperm can fertilize a single ovum.

•The secretions of the acrosome make easy the entry of the sperm to the ovum by the zona pellucida and the plasma membrane.

•This phenomenon induces the secondary oocyte to complete meiosis. This is again an unequal division and forms a second polar body and a haploid ovum.

•The haploid nucleus of the sperm and the ovum fuse together and form a diploid