Animal Reproduction

Chapter 46

Asexual reproduction

Mitosis:

Fission: (**Fig 46.2**)

Budding:

Fragmentation:

Advantage:

Disadvantage:

Sexual reproduction

Gamete:

Ovum:

Sperm:

Zygote:

Advantage:

Disadvantage:

Reproductive cycles:

Parthenogenetic reproduction:

Hermaphroditism:

Sequential hermaphroditism:

Fertilization:

External fertilization (**Fig 46.5**)

Internal fertilization

Humans:

Female: (**Fig 46.9**)

External reproductive structures: vulva

Clitoris:

Labia:

Internal reproductive structures: (**Fig 46.9**)

Ovary:

Oviduct:

Uterus:

Cervix:

Vagina:

Ovary:

Follicle:

Ovulation:

Corpus luteum:

Mammary glands

Male (**Fig 46.10**)

Testes:

Seminiferous tubule

Leydig cells:

Seritoli cells:

Scrotum:

Ducts & glands: (**Fig 46.10**)

Epididymus:

Vas deferens:

Seminal vesicle:

Ejaculatory duct:

Prostate:

Bulbourethral gland:

Urethra:

Gamete development:

Spermatogenesis: (**Fig 46.12**)

Spermatogonium

Primary spermatocyte

Secondary spermatocyte

Spermatid

Sperm

Oogenesis: (**Fig 46.11**)

Oogonium

Primary oocyte

Secondary oocyte

Polar body – first

Ovum

Polar body – second

Reproductive cycles

Menstrual cycle

Estrous cycle

Human female reproductive cycle

Ovarian cycle

Follicular phase:

hypothalamus GnRH

FSH:

LH:

Estrogen:

Ovulation:

LH:

Luteal phase:

Corpus luteum

Progesterone:

Relaxin:

Inhibin:

Uterine cycle

Proliferative phase:

Secretory phase:

Menstrual flow phase:

Human male reproductive control

(**Fig 46.14**)

Hypothalamus:

GnRH

FSH

LH

Pregnancy

(**Fig 46.15**)

Conception:

Cleavage:

Blastocyst:

Embryo:

HCG:

First trimester:

Trophoblast: (**Fig 46.16**)

Organogenesis: (**Fig 46.17a**)

Fetus:

Mother:

Second trimester: (**Fig 46.17b,c**)

Third trimester:

Labor: (**Fig 46.18**)

Parturition: birth (**Fig 46.19**)

Thinning & dilation of cervix

Expulsion

Delivery of placenta

