

THE REPRODUCTIVE SYSTEM -- CONTINUITY OF THE SPECIES

THE MALE REPRODUCTIVE SYSTEM

- during human embryo development sex differentiation occurs about 8 weeks after conception
- testes (male gonads) develop inside the body and descend into the scrotum during the last two months of fetal development

Why? Sperm will not develop at body temperature thus must be housed outside the body

- males have 2 testicles = 1 and a spare
- each testis (singular) is composed of tiny seminiferous tubules where gametes called sperm are produced through the process of meiosis

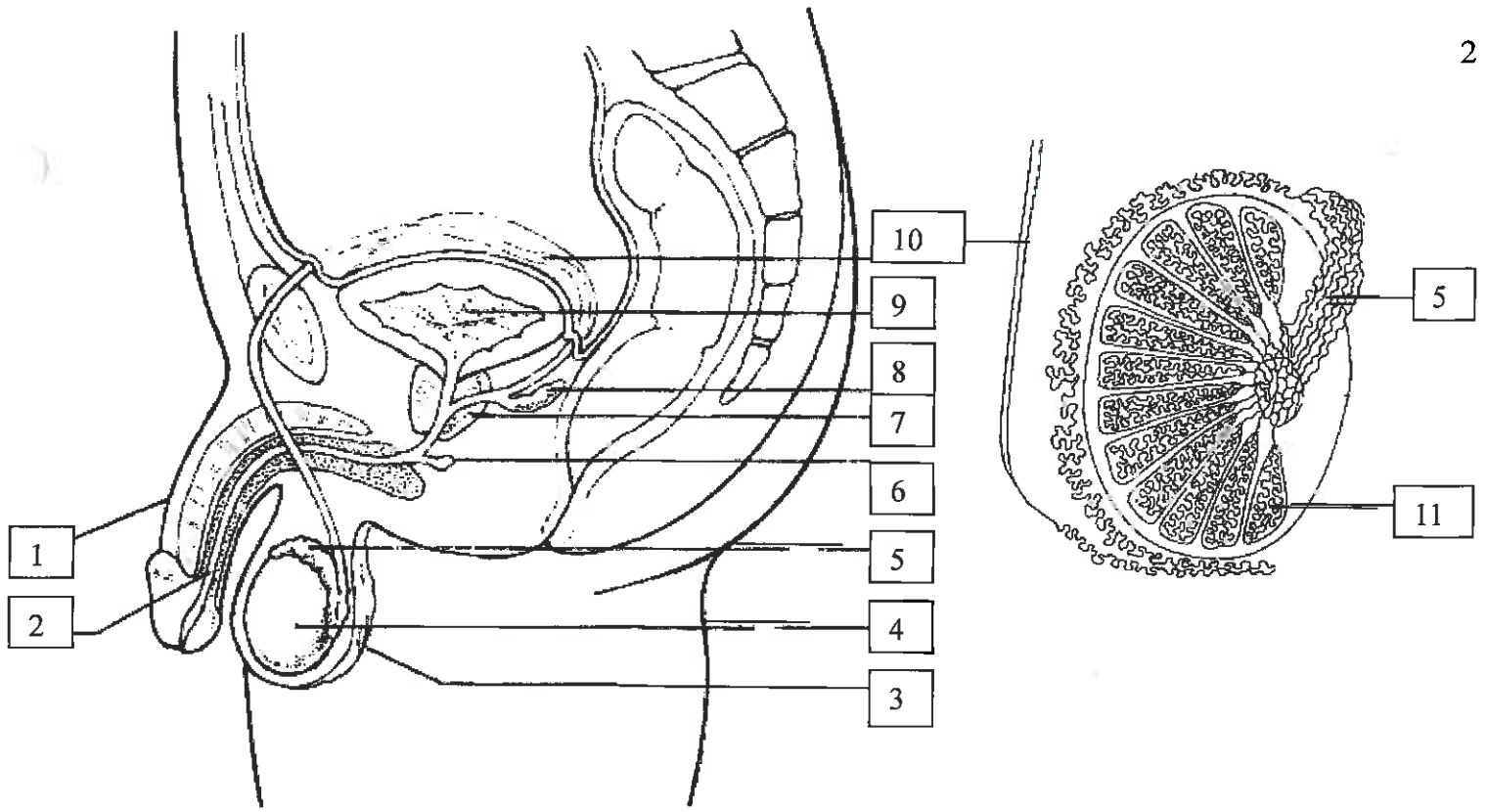
= a special type of cell division resulting in cells with half the full # of chromosomes

- in males, sperm are produced continuously from adolescence (10 - 12 years of age) to death
- the male reproductive system is aka the Urogenital System as some structures are part of both the reproductive and excretory system.

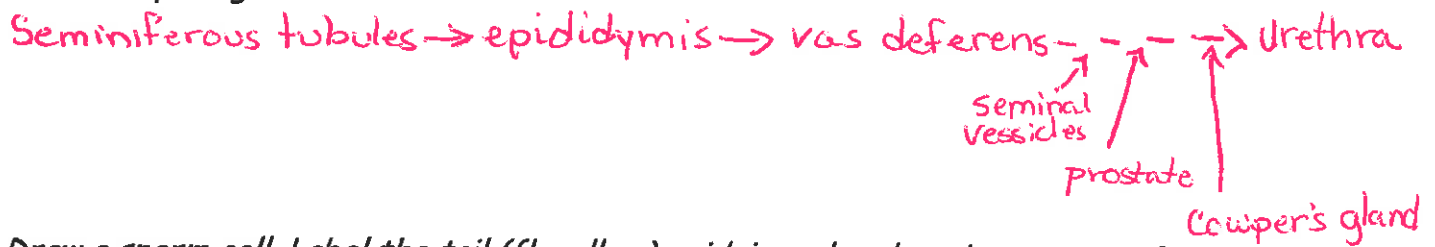
ASSIGNMENT (pp. 535- 539)

1. Identify and give functions for each of the following:

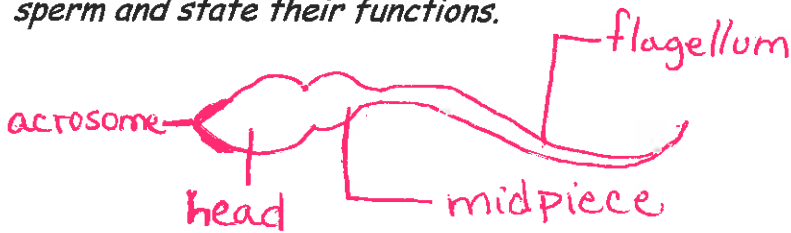
# on Diagram	Structure	Function
3	scrotum	- holds testicles outside the body = lower temp.
2	urethra	- passage for urine & semen out of the body
5	epididymis	- holds testes in place - maturation site for sperm
10	ductus (vas) deferens	- transport sperm from testes to urethra
7	prostate gland	- seminal fluid = fluid for sperm to swim in
6	bulbourethral (Cowper's) glands	- secrete mucus into urethra = lubrication + neutralize acid
8	seminal vesicles	- Semen production = fluid containing carbohydrates = NRG
1	penis	- organ responsible for delivery of sperm + excretion
4	testes (testicle)	- male gonad; produces sperm + hormones (ie testosterone)
11	seminiferous tubules	- site of sperm production (meiosis)
9	bladder	- storage of urine



2. Using a flow chart, describe the path of sperm from the seminiferous tubules to the urethral opening.



3. Draw a sperm cell. Label the tail (flagellum), midpiece, head, and acrosome of a mature sperm and state their functions.



Structure	Function
Tail (flagellum)	motility
Midpiece	NRG
Head	fertilization of egg
Acrosome	penetration of egg

4. Describe the functions of testosterone.

Stimulates:

- ① Development of 2ndary sex characteristics
- ② Stimulates spermatogenesis
- ③ Controls reproductive behaviour (sex drive)
- ④ muscle development

5. Complete the following flow chart to explain how hormones control the male reproductive system. Use the terms: pituitary, testosterone, testicles, sperm, hypothalamus. Trace over the negative feedback arrows making them red.

