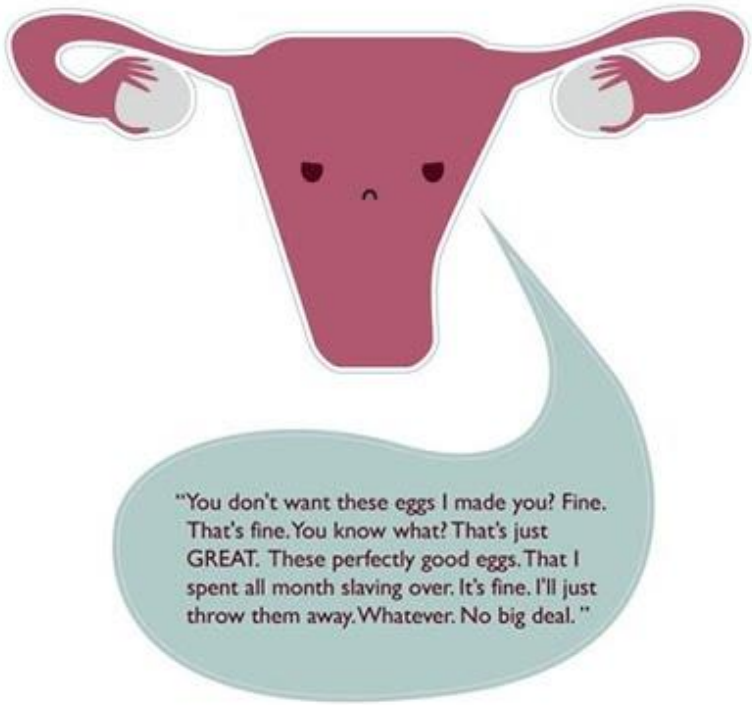
NAME: _____
BLOCK: _____ DATE: _____

UNIT 6 CONCEPT OVERVIEW

Reproductive System & Endocrine System

#	Concepts & Elaborations
6-1	**Functional interrelationships of the structures of the female reproductive system** - Ovarian and Uterine cycles - Hormonal regulation - Menstruation, fertilization, pregnancy, lactation, menopause
6-2	**Functional interrelationships of the structures of the male reproductive system** - Spermatogenesis - Seminal fluid - Hormonal Regulation
6-3	**Functional interrelationships of the Endocrine system & relationships to other systems** - Insulin/glucagon - Oxytocin - FSH, LH, GnRH, testosterone, ICSH - Thyroxine - ADH/ANH/Aldosterone - Cortisol/Adrenaline - Gastrin, Secretin, CCK



UNIT 6 REVIEW

REPRODUCTIVE & ENDOCRINE SYSTEMS

The following worksheet is intended to augment your revision for the upcoming unit test. It is essential that you understand all the learning outcomes in each component of unit 5.

REPRODUCTIVE SYSTEM

Part A: Definitions: Please define or explain the following terms, in your **OWN WORDS**, in as few words as **clarity allows**.

a)	testes	
b)	scrotum	
c)	seminiferous tubules	
d)	epididymis	
e)	sperm	
f)	vas deferens	
g)	acrosome	
h)	spermatogenesis	
i)	penis	
j)	Interstitial cells	
k)	Semen/seminal fluid	
l)	seminal vesicles	
m)	prostate gland	
n)	Cowper's glands	
o)	urethra	
p)	testosterone	
q)	FSH (in males)	
r)	LH (in males)	
s)	ovaries	
t)	oviducts	
u)	uterus	
v)	cervix	
w)	vagina	
x)	follicles	
y)	oocyte	
z)	zona pellucida	
aa)	ovulation	
bb)	corpus luteum	
cc)	clitoris	
dd)	hypothalamus	
ee)	FSH (in females)	
ff)	LH (in females)	
gg)	estrogen	
hh)	prostaglandins	
ii)	androgens	

Part B: Fill In The Blanks

1. The part of the male reproductive system that creates an antacid secretion is called the _____ _____.
2. Semen is composed of _____, which is made in the _____tubules, and secretions from the _____gland, _____glands, and _____vesicles.

3. The seminal vesicles secrete a fluid that is rich in the monosaccharide _____, which serves as _____for the sperm.
4. Cowper's glands secrete a fluid that acts as a _____.
5. The _____cells in the testes produce testosterone in response to the hormone **LH**.
6. The hormone _____promotes spermatogenesis.
7. _____is made inside the seminiferous tubules and sent from there to the _____for storage.
8. Label the diagram of the male reproductive system.

1.	
2.	
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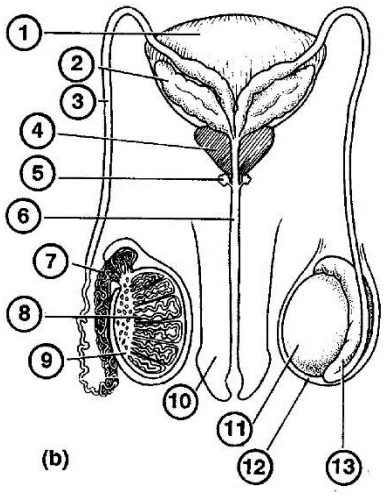
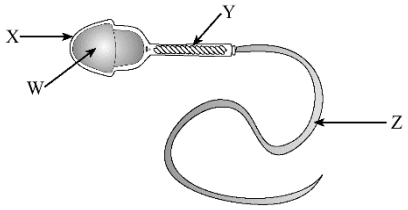


9. List the structures through which sperm passes in order, from the following list: epididymis, seminiferous tubules, urethra, penis, vas deferens.
_____, _____, _____, _____, _____
10. Label the parts of the diagram of the sperm cell and list a function for each part:



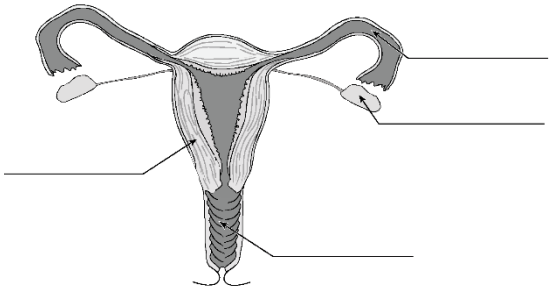
	Name	Function
W		
X		
Y		
Z		

11. List 3 function of testosterone

A	
B	
C	

12. The _____produces the hormone GnRH when testosterone and _____levels are _____.
13. This causes the _____pituitary gland to release _____and _____.
14. LH causes _____cells in the testes to release more _____.
15. FSH causes the seminiferous tubules to absorb more _____, which in turn causes them to produce more _____. As it makes more sperm, it also releases more of the hormone _____. High levels of this hormone feedback to the _____and _____, causing them to release less of their hormones.
16. Label the following diagram and give a function for each labeled part.

Name	Function



17. List 3 functions of estrogen:

A	
B	
C	

18. The entrance to the uterus is called the _____.
19. The female erectile organ containing many sensory nerve receptors is called the _____.
20. the menstrual cycle lasts on average _____days. **Day 1** is the first day that _____starts, and usually finishes by day 5.
21. During menstruation, levels of female _____are low.
22. In the follicular phase (days 1 – 14), low levels of hormones are detected by the hypothalamus, which releases _____. This is sent to the pituitary gland, which releases _____and _____.
23. FSH causes several immature _____, along with their surrounding _____cells, in the ovaries to begin to develop. The developing follicle cells release increasing amounts of _____.
24. This hormone is responsible for the _____phase of the uterine cycle. In the uterus, _____vessels and _____proliferate.
25. Rising levels of estrogen cause the release of a large amount of **LH** on about day 13 which causes _____.
26. Ovulation normally occurs on day _____. In ovulation, the _____is released from the ovary, leaving behind the _____cells, which go on to form the _____ _____. This structure continues to release the hormones estrogen and progesterone. Of these two hormones, _____is most important for the luteal phase of the ovarian cycle. This hormone cause the _____phase of the uterine cycle. The uterine glands mature and release a thick mucus, and the endometrium _____in thickness.
27. High levels of _____cause _____feedback to the anterior pituitary, shutting down the release of _____. Lower levels of LH cause the _____ _____to disintegrate. Since it is breaking down, it can no longer release estrogen and progesterone.
28. Low levels of female _____by day 28 will cause the uterine _____to be shed, and the cycle will start anew.
29. However, if fertilization happens, the _____cycle will be interrupted. Fertilization usually occurs in the upper _____. The fertilized egg is first called a **ZYGOTE** and then an _____as it divides through mitosis.
30. The embryo, upon reaching the **UTERUS**, will embed itself into the endometrium. This is called _____.
31. A shared set of membranes called the placenta forms around the embryo. This will begin to secrete the hormone _____, which temporarily maintains the corpus luteum.
32. As the placenta develops and matures, it makes its own _____and _____. This will maintain the uterine lining so that _____does not occur during pregnancy.
33. After 9 months, the fetus is ready to be born. The pressure of the baby's head against the cervix causes a nerve impulse to be sent to the hypothalamus. This causes the hypothalamus to release the hormone _____to the pituitary, which releases it into the blood. This hormone causes _____. It operates on a _____feedback loop. The hormone causes the uterine muscles to _____with ever greater intensity until the baby is pushed out of the uterus through the _____, which serves as the birth canal.
34.

COLUMN A	COLUMN B	
prostate gland		
ovary	a) location for spermatogenesis	_____
epididymis	b) has enzymes used to penetrate egg	_____
seminiferous tubule	c) sperm mature here	_____
uterus	d) secretes progesterone	_____
fallopian tube	e) location of the developing fetus	_____
ductus (vas) deferens	f) provides nutrients for sperm	_____
acrosome		

COLUMN A	COLUMN B	
acrosome		
corpus luteum	a) stimulates secretions from the corpus luteum	_____
luteinizing hormone	b) causes the endometrium to thicken	_____
estrogen	c) an organ of copulation	_____
vagina	d) contains enzymes necessary to penetrate egg	_____
urethra	e) area for maturation of sperm	_____
epididymis	f) secretes testosterone	_____
interstitial cell		