

Name: \_\_\_\_\_ Block: \_\_\_\_\_ Date: \_\_\_\_\_

**Biology 12 - Excretion**

⇒ Part A: Definitions: Define the following terms, **IN YOUR OWN WORDS, IN AS FEW WORDS AS CLARITY ALLOWS.**

i.	excretion	
ii.	ammonia	
iii.	urea	
iv.	Uric acid	
v.	creatinine	
vi.	kidneys	
vii.	ureters	
viii.	Urinary bladder	
ix.	urethra	
x.	cortex	
xi.	medulla	
xii.	pelvis	
xiii.	nephrons	
xiv.	Bowman's capsule	
xv.	Proximal convoluted tubule	
xvi.	Distal convoluted tubule	
xvii.	Collecting duct	
xviii.	glomerulus	
xix.	Peritubular capillary network	
xx.	Pressure filtration	
xxi.	filtrate	
xxii.	Selective reabsorption	
xxiii.	Tubular excretion	
xxiv.	Antidiuretic hormone	

**Part B - Short Answers**

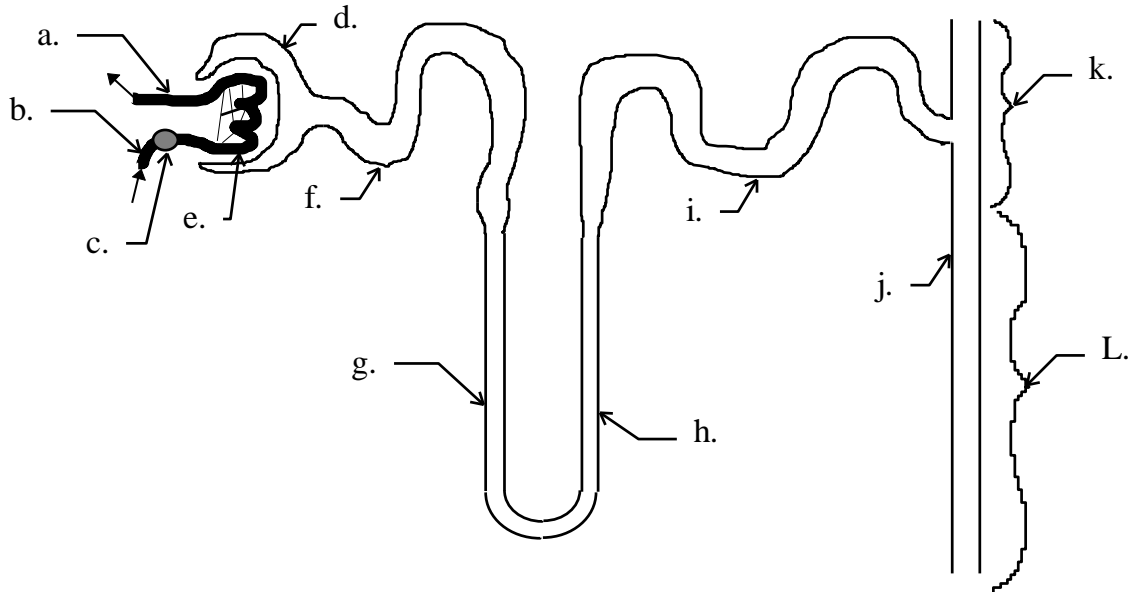
- Urea is a waste product from \_\_\_\_\_ metabolism and is made in the \_\_\_\_\_ and excreted by the \_\_\_\_\_.
- The primary type of waste found in urine is \_\_\_\_\_ waste.
- The outermost portion of the kidney is called the \_\_\_\_\_. The middle layer is called the \_\_\_\_\_. Urine collects in the cavity called the renal \_\_\_\_\_.
- Arrange the following in the correct sequence in which they function in urine formation:

collecting duct	distal convoluted tubule	Bowman's Capsule	proximal convoluted tubule	loop of Henle

- Name a substance that is filtered, maximally reabsorbed, and still in urine. \_\_\_\_\_
- Glucose is not normally found in the urine; it is reabsorbed totally by means of \_\_\_\_\_.
- When ADH is present, urine production \_\_\_\_\_.
- If the blood is acidic, \_\_\_\_\_ ions are excreted in combination with \_\_\_\_\_, while \_\_\_\_\_ and bicarbonate ions are reabsorbed.

9. The functional units of the kidneys are called \_\_\_\_\_. Each kidney has about one \_\_\_\_\_ of them.
10. Please label the following parts on the diagram of the nephron.

A.	E.	I.
B.	F.	J.
C.	G. Descending Limb of	K. _____ Region of Kidney
D.	H. _____ Limb of Loop of Henle	L. _____ Region of Kidney



11. Using the letters from the above, indicate the location or locations that best fit the description:

a) Glucose is reabsorbed?		b) Impermeable to H <sub>2</sub> O	
c) Impermeable to salt		d) responsible for hypotonic urine	
e) site of pressure filtration		f) place where pH is adjusted	
g) releases Renin to increase blood pressure		h) contains dissolved proteins	
l) ADH primarily acts here		j) site of selective reabsorption	
k) site of tubular excretion		l) bicarbonate ions actively reabsorbed here	
m) region with the "saltiest" cells		n) H <sub>2</sub> O reabsorbed here	
o) penicillin would be excreted here		p) contains urine	
q) cells here would have a lot of mitochondria		r) wastes leave the blood here	

12. If the blood is alkaline, fewer \_\_\_\_\_ ions are excreted and fewer \_\_\_\_\_ and bicarbonate ions are reabsorbed.
13. One end of the nephron is shaped into a double-layered, cup-like structure which may be called a \_\_\_\_\_.
14. Many collecting ducts join together to empty into the \_\_\_\_\_.
15. The duct that carries urine from the bladder to the outside is the \_\_\_\_\_.
16. The ureter carries urine from the \_\_\_\_\_ to the \_\_\_\_\_.
17. The solution produced when blood is filtered through the walls of the glomerulus and the nephric capsule is called the \_\_\_\_\_.
18. The force that causes filtration is \_\_\_\_\_.
19. The organs of excretion most responsible for ridding the body of CO<sub>2</sub> are the lungs.
20. Aldosterone is a hormone that is produced in the \_\_\_\_\_ of the \_\_\_\_\_ glands.
21. Aldosterone regulates the levels of \_\_\_\_\_ ions and \_\_\_\_\_ ions in the blood. It causes the nephron to \_\_\_\_\_ more sodium back into the blood and \_\_\_\_\_ more potassium from the blood into the urine.
22. The renal vein would carry blood that is \_\_\_\_\_ in oxygen and \_\_\_\_\_ in urea.
23. The renal artery would carry blood that is \_\_\_\_\_ in oxygen and \_\_\_\_\_ in urea.
24. List five other organs of excretion besides the kidneys:

_____	_____	_____	_____	_____
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25. True or false: The solution in a kidney dialysis machine should contain glucose. \_\_\_\_\_