
	<b>INDIAN SCHOOL AL WADI AL KABIR</b>		
<b>Class: XI</b>	<b>Department: SCIENCE 2021 – 22</b> <b>SUBJECT: BIOLOGY</b>		<b>Date of submission:</b> <b>30.11.2021</b>
<b>Worksheet: 12</b> <b>with answers</b>	<b>CHAPTER: EXCRETORY PRODUCTS</b> <b>AND THEIR ELIMINATION</b>		<b>Note:</b> <b>A4 FILE FORMAT</b>
<b>NAME OF THE STUDENT</b>		<b>CLASS &amp; SEC:</b>	<b>ROLL NO.</b>

### MULTIPLE CHOICE QUESTIONS

1. Bony fishes eliminate their nitrogenous waste material in the form of:
  - (a) Ammonia
  - (b) Urea
  - (c) Uric acid
  - (d) Both (b) and (c)
  
2. Green glands are -----
  - (a) Excretory organs of crustaceans
  - (b) Excretory organs of insects
  - (c) Digestive glands of crustaceans
  - (d) Digestive glands of insects
  
3. Columns of Bertini are seen in -----
  - (a) Renal medulla
  - (b) Renal cortex
  - (c) Between medullary pyramids
  - (d) Ureters
  
4. ----- results in the absorption of sodium and water reabsorption from distal part of tubule
  - (a) ADH
  - (b) Renin

(c) Aldosterone

(d) Angiotensin

5. Epithelial cells of Bowman's capsule are known as

(a) Podocytes

(b) Columns of Bertini

(c) JGA

(d) Glomerular cells

## 2 MARKS QUESTIONS

6. Which is the most toxic nitrogenous product produced in animals?

7. From where the pelvis receives urine?

8. Name the waste materials which are eliminated through skin

9. Expand RAAS.

10. Distinguish between ureotelic and uricotelic organisms

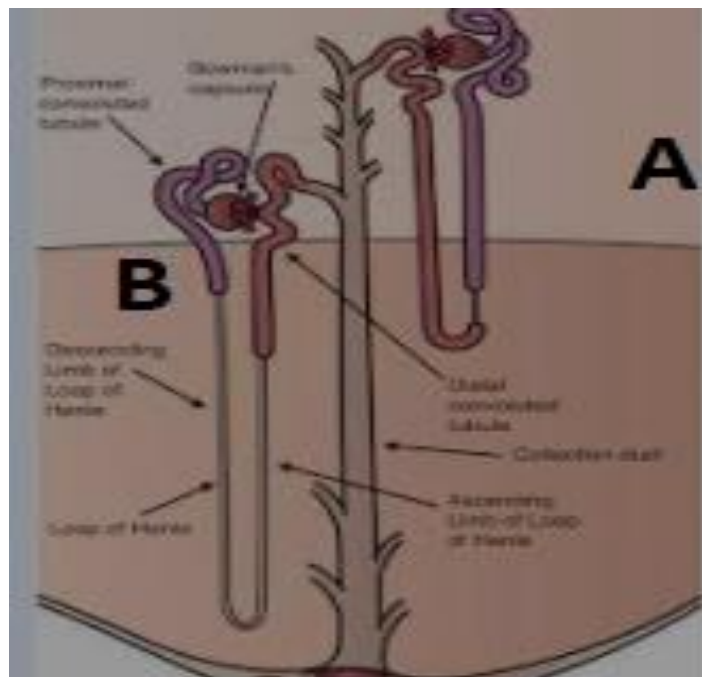
11. Write about the excretory role of lungs.

12. Tabulate the differences between two types of nephrons.

13. Give a brief description of hemodialysis and its advantages.

14. Give a brief description of juxtaglomerular apparatus

15. Identify the types of nephrons marked as 'A' and 'B'

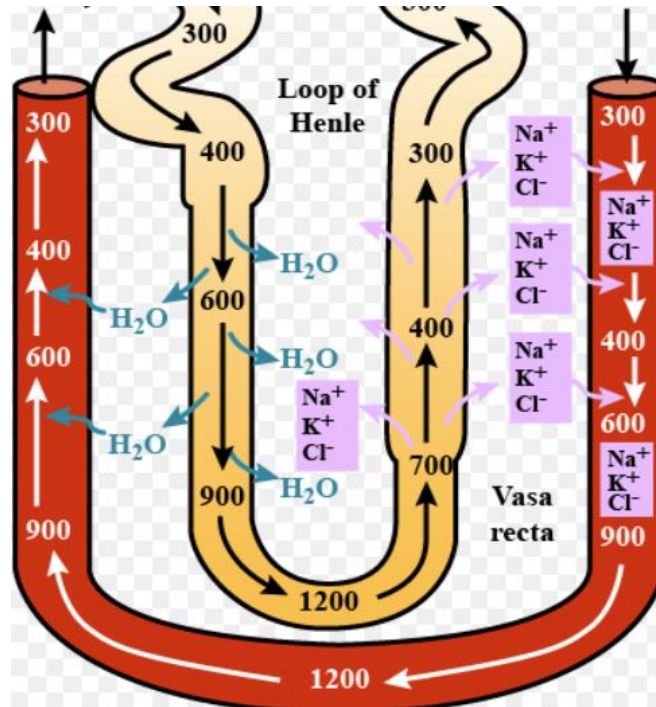


## 3 MARKS QUESTIONS

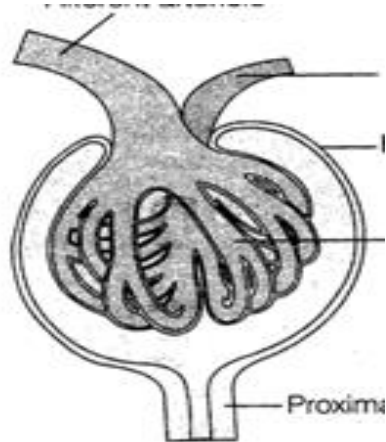
16. Draw a neat labelled diagram of human excretory system and label any 6 parts.

17. How does antidiuretic hormone regulate the functioning of kidney?

18. Observe the given diagram



- (a) Identify the mechanism represented in the image  
 (b) Explain the importance of this process
19. Observe the following figure.



- (a) Name the structure.  
 (b) Where can you find this structure in human body?  
 (c) Name any four parts shown in the figure.

## 5 MARKS QUESTIONS

20. (a) Define Glomerular Filtration Rate (GFR) and how it affects urine formation?  
(b) With the help of a neat labelled diagram explain the structure of the basic unit of kidney.
21. With the help of schematic representation explain counter current mechanism.
22. Explain the major events associated with different parts of renal tubule during urine formation.
23. How the functions of kidney are regulated?
24. High osmolarity is maintained in medullary region of kidney. Give reasons.
25. With the help of a neat labelled diagram explain the structure of human kidney.

### HINTS & SOLUTION

1. (Ans. a)
2. (Ans. a)
3. (Ans. c)
4. (Ans. c)
5. (Ans. a)
  
6. (Hints: Ammonia, mention its elimination)
7. (Hints: Collecting duct which receives from nephrons)
8. (Hints: Sweat glands – water, urea, lactic acid, salts and Sebaceous gland – wax, sterols etc.)
9. (Hints: Renin Angiotensin Aldosterone System – give its importance)
10. (Hints: Ureotelic – urea is the nitrogenous waste and Uricotelic – uric acid is the nitrogenous waste)
11. (Hints: Substances eliminated through lungs – carbon dioxide, water)
12. (Hints: Differences between cortical and juxta medullary nephrons)
13. (Hints: Steps involved in hemodialysis)
14. (Hints: Special cellular modification formed at the junction between afferent arteriole and DCT)
15. (Hints: A – Cortical and B – Juxtamedullary nephrons)

16. (Hints: 19.1, Page no. 291)
17. (Hints: Stimulus for release, role of hypothalamus, functions of ADH)
18. (Hints: Counter current mechanism, explanation of the process of concentrating filtrate)
19. (Hints: (a) Renal corpuscle, (b) Kidney – head portion of nephrons, (c) any four parts)
20. (Hints: (a) Amount of filtrate formed per minute, explanation of hormonal roles, (b) Structure and diagram of nephrons)
21. (Hints: Definition, importance and location of counter current mechanism, diagram)
22. (Hints: Functions of PCT, Henle’s loop, DCT)
23. (Hints: Regulation by hypothalamus, JGA and heart)
24. (Hints: Important for water and mineral reabsorption, concentrating filtrate and prevents diuresis)
25. (Hints: 19.2, Page no. 292)

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