

S.N.KANSAGRA SCHOOL

BIOLOGY DEPARTMENT

Name \_\_\_\_\_

Date \_\_\_\_\_

**Q1. Name the following:**

1. Fibrous connective tissue covering the kidneys. \_\_\_\_\_
2. The deep notch present on the inner surface of the kidney. \_\_\_\_\_
3. The peripheral dark reddish brown part of kidney. \_\_\_\_\_
4. The central light red area of the kidney. \_\_\_\_\_
5. Funnel shaped structure in which all major calyces open. \_\_\_\_\_
6. Functional and structural units of kidney. \_\_\_\_\_
7. Network of capillaries present in the cavity of Bowman's capsules. \_\_\_\_\_
8. Chemical pathway leading to urea formation in liver. \_\_\_\_\_
9. Glomerular filtrate after it passes through the proximal convoluted duct. \_\_\_\_\_
10. Pituitary gland hormone, causing the absorption of water in the collecting duct. \_\_\_\_\_
11. Increase flow of urine caused by caffeine and alcohol. \_\_\_\_\_
12. The process of urination. \_\_\_\_\_
13. Organs other than kidneys, involved in excretion in human body. \_\_\_\_\_
14. Pear-shaped sac like organ for temporary storage of urine in human body. \_\_\_\_\_

**Q 2. Fill in the blanks.**

1. The separation and elimination of the \_\_\_\_\_ from the body is called excretion.
2. Human excretory system includes \_\_\_\_\_, \_\_\_\_\_ and urethra.
3. Right kidney is \_\_\_\_\_ than the left one.
4. Each kidney consists of about 10 lac \_\_\_\_\_. These are functional and structural units of the kidney.

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5. Kidney consists of two types of nephrons, \_\_\_\_\_ and \_\_\_\_\_ nephrons.
6. Each nephron consists of a \_\_\_\_\_ corpuscle, neck, proximal \_\_\_\_\_, loop of \_\_\_\_\_ and distal \_\_\_\_\_.
7. The glomerulus receives blood through \_\_\_\_\_ arteriole and blood moves out through \_\_\_\_\_ arteriole.
8. Glomerulus and Bowman's capsule are jointly called as \_\_\_\_\_.
9. Proximal convoluted duct is lined by cuboidal \_\_\_\_\_ epithelial tissue.
10. Loop of Henle can be distinguished into three regions \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
11. Formation of urea takes place in the \_\_\_\_\_ and is also called \_\_\_\_\_ cycle.
12. Ultrafiltration of blood takes place in \_\_\_\_\_.
13. Some toxic substances such as \_\_\_\_\_ acid, \_\_\_\_\_ and \_\_\_\_\_ ions are secreted by the blood into renal fluid.
14. Out of \_\_\_\_\_ litre glomerular filtrate, only \_\_\_\_\_ to \_\_\_\_\_ litre urine formation takes place per day.
15. The opening of urinary bladder into urethra is guarded by \_\_\_\_\_ and \_\_\_\_\_ sphincters.
16. On the basis of the nature of nitrogenous waste formed, the animals are divided into three categories, namely a) \_\_\_\_\_ b) \_\_\_\_\_ c) \_\_\_\_\_.
17. Urine formation involves three processes- \_\_\_\_\_ filtration, \_\_\_\_\_ reabsorption, and \_\_\_\_\_ secretion.
18. A \_\_\_\_\_ is the structural and functional unit of the kidney.
19. The u- shaped tube of uriniferous tubule is called \_\_\_\_\_.
20. The first network of capillaries present in nephrons is known as \_\_\_\_\_



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6. By what process does an artificial kidney work?
- a. filtration
  - b. phagocytosis
  - c. dialysis
  - d. hemolysis
7. Tuft of capillaries inside the Malpighian body is known as
- a. Glomerulus
  - b. Collecting ducts
  - c. Nephron
  - d. Renal artery
8. Formation of urea occurs in
- a. Liver
  - b. Kidneys
  - c. Small intestine
  - d. Pancreas
10. Which of these is not a normal constituent of urine:
- a. Sugar
  - b. Urea
  - c. Creatinine
  - d. Uric acid
11. Which of these is not an excretory organ: intestine, lungs, thyroid or kidneys?
- a. Thyroid
  - b. Intestine
  - c. Lungs
  - d. Kidneys
12. Main function of the \_\_\_\_\_ is to filter the wastes from the blood and excrete them in the form of urine.
- a. Kidneys
  - b. Lungs
  - c. Urinary Bladder
  - d. Endocrine glands
13. Bag like structure in which urine is stored.
- a. Urinary Bladder
  - b. Kidney
  - c. Ureter
  - d. Stomach
14. Which is not true regarding kidneys?
- A. They do not have any capsule.
  - B. They are bean shaped and reddish brown in color.
  - C. Each kidney is divided into 2 parts - cortex and medulla.
  - D. They are the main excretory organs.
- a. A
  - b. B
  - c. C
  - d. D
15. Which of these is not true?
- A. Kidney excretes urea.
  - B. A small fraction of CO<sub>2</sub> is removed through the skin.
  - C. Small amount of salt is excreted through skin.
  - D. Feces are excreted through the anus.
- a. A
  - b. B
  - c. C
  - d. D

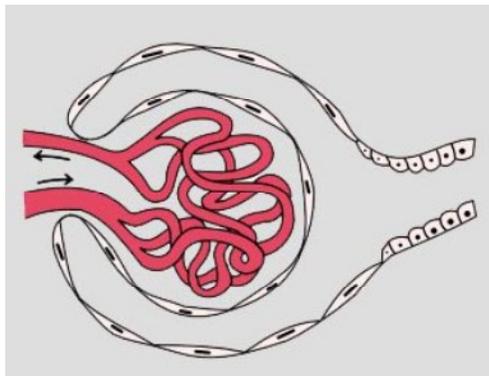
16. Which of these is not a function of kidneys?

- A. Maintenance of acid base balance.
- B. Excretion of nitrogenous waste products.
- C. Temperature regulation.
- D. Maintenance of water balance.

- a. A
- b. B

- c. C
- d. D

**Q 5. The given diagram is that of a part of the kidney. Identify and label its parts-**



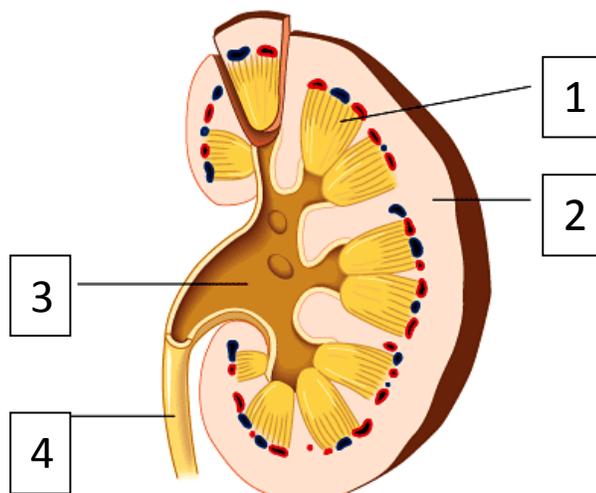
a. Name the process taking place here.

b. Name two nutrients and two harmful substances associated with the diagram and give their fate.

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**Q 6. Given below is the internal structure of the kidney. Observe and answer the questions.**



**B. The kidney**

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1. What are the two main parts seen in the internal structure of the kidney?

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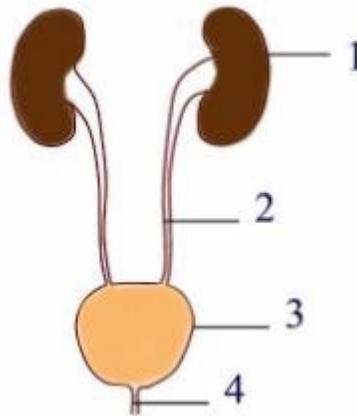
2. What is the outermost layer of the kidney?

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3. On the basis of the excretory material state the types of excretory products.

.....  
.....

Q1. Observe the given diagram and label the parts-



1. Name and give the number of the part responsible for storing urine temporarily.

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2. How is structure 4 different in males and females?

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3. What is the function of structure 2?

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4. What is the capacity of the structure 3? How can it manage to hold its contents?

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5. Name the structure that guards 3.

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6. State the function of structure 1 and name the part present inside that is responsible for it.

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7. What is the length of structure 2?

.....

8. When structure 3 contracts the contents do not move back into 2. Give reason.

.....

9. Show the position of the adrenal gland in the diagram.

10. How many functional units are present in structure 1?

.....

11. Mark hilum in the diagram and give its importance.

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12. How are the following metabolic wastes removed from the body?

A. CO<sub>2</sub> .....

B. Water .....

C. Salts .....

D. Urea .....