CHAPTER 6

Excretory Products and their Elimination

Excretory Organs, Human Excretory System

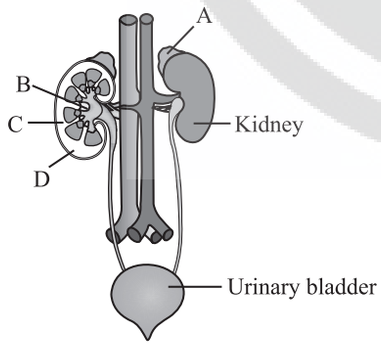
1. Nitrogenous waste is excreted in the form of pellet or paste by *(2022)*

a. *Pavo*
b. *Ornithorhynchus*
c. *Salamandra*
d. *Hippocampus*

2. In mammals, which blood vessel would normally carry largest amount of urea? *(2016 - I)*

a. Renal Vein
b. Dorsal Aorta
c. Hepatic Vein
d. Hepatic Portal Vein

3. Figure shows human urinary system with structures labeled A to D. Select option which correctly identifies them and gives their characteristics and/ or functions: *(2013)*



a. D-Cortex - Outer part of kidney and do not contain any part of nephrons.
b. A-Adrenal gland- Located at the anterior part of kidney. Secrete catecholamine's which stimulate glycogen breakdown.
c. B-Pelvis-Broad funnel shaped space inner to hilum, directly connected to loops of Henle's.
d. C-Medulla - Inner zone of kidney and contains complete nephrons.

Urine Formation, Function of Tubules

4. Which of the following statements is correct? *(2017-Delhi)*

a. The ascending limb of loop of Henle is impermeable to water
b. The descending limb of loop of Henle is impermeable to water
c. The ascending limb of loop of Henle is permeable to water
d. The descending limb of loop of Henle is permeable to electrolytes

5. The part of nephron involved in active reabsorption of sodium is: *(2016 - II)*

a. Bowman's capsule
b. Descending limb of Henle's loop
c. Distal convoluted tubule
d. Proximal convoluted tubule

6. Removal of proximal convoluted tubule from the nephron will result in: *(2015)*

a. No change in quality and quantity of urine
b. No urine formation
c. More diluted urine
d. More concentrated urine

Mechanism of Concentration of Filtrate, Regulation of Kidney Functions, Micturition

7. Select the correct statement: *(2020-Covid)*

a. Angiotensin II is a powerful vasodilator.
b. Counter current pattern of blood flow is not observed in vasa recta.
c. Reduction in Glomerular Filtration Rate activates JG cells to release renin.
d. Atrial Natriuretic Factor increases the blood pressure.

8. The increase in osmolarity from outer to inner medullary interstitium is maintained due to: *(2020-Covid)*

(i) Close proximity between Henle's loop and vasa recta
(ii) Counter current mechanism
(iii) Selective secretion of HCO^-_3 and hydrogen ions in PCT
(iv) Higher blood pressure in glomerular capillaries

a. (iii) and (iv) b. (i), (ii) and (iii)
c. (i) and (ii) d. Only (ii)

9. Which of the following factors is responsible for the formation of concentrated urine? *(2019)*

a. Low levels of antidiuretic hormone
b. Maintaining hyperosmolarity towards inner medullary interstitium in the kidneys.
c. Secretion of erythropoietin by Juxtaglomerular complex
d. Hydrostatic pressure during glomerular filtration

10. Match the items given in Column-I with those Column-II and select the correct option given below *(2018)*

Column-I (Function)		Column-II (Part of Excretory System)	
A.	Ultrafiltration	i.	Henle's loop
B.	Concentration of urine	ii.	Ureter
C.	Transport of urine	iii.	Urinary bladder
D.	Storage of urine	iv.	Malpighian corpuscle
		v.	Proximal convoluted tubule

a. A-iv B-v C-ii D-iii
b. A-iv B-i C-ii D-iii
c. A-v B-iv C-i D-ii
d. A-v B-iv C-i D-iii

11. A decrease in blood pressure/volume will **not** cause the release of *(2017-Delhi)*

a. Renin
b. Atrial Natriuretic Factor
c. Aldosterone
d. ADH

12. Which of the following does not favour the formation of large quantities of dilute urine? *(2015)*

a. Renin
b. Atrial-natriuretic factor
c. Alcohol
d. Caffeine

13. Human urine is usually acidic because: *(2015 Re)*

a. Excreted plasma proteins are acidic
b. Potassium and sodium exchange generates acidity
c. Hydrogen ions are actively secreted into the filtrate.
d. The sodium transporter exchanges one hydrogen ion for each sodium ion, in peritubular capillaries.

14. Which of the following causes an increase in sodium reabsorption in the distal convoluted tubule? *(2014)*

a. Decrease in antidiuretic hormone levels
b. Increase in aldosterone levels
c. Increase in antidiuretic hormone levels
d. Decrease in aldosterone levels

Role of Other Organs and Excretory Disorders

15. Use of an artificial kidney during hemodialysis may result in : *(2019)*

A. Nitrogenous waste build-up in the body
B. Non-elimination of excess potassium ions
C. Reduced absorption of calcium ions from gastro-intestinal tract
D. Reduced RBC production

Which of the following option is the most appropriate?

a. (A) and (B) are correct b. (B) and (C) are correct
c. (C) and (D) are correct d. (A) and (D) are correct

16. Match the items given in Column-I with those in Column-II and select the correct option given below *(2018)*

Column-I		Column-II	
A.	Glycosuria	i.	Accumulation of uric acid in joints
B.	Gout	ii.	Mass of crystallised salts within the kidney
C.	Renal calculi	iii.	Inflammation in glomeruli
D.	Glomerular nephritis	iv.	Presence of glucose in urine

a. A-iii B-ii C-iv D-i
b. A-i B-ii C-iii D-iv
c. A-ii B-iii C-i D-iv
d. A-iv B-i C-ii D-iii

Answer Key

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
a	c	b	a	d	c	c	c	b	b	b	a	c	b	c	d