

Excretory Products and their Elimination

I. Select the correct answer from the following questions:

Question 1.

Blood coming out of liver has high concentration of

- (a) Urea
- (b) Protein
- (c) Erythrocytes
- (d) Oxygen.

▼ [Answer](#)

Answer: (a) Urea.

Question 2.

Urinary bladder opens into

- (a) tleter
- (b) Urethra
- (c) Uterus
- (d) All of these.

▼ [Answer](#)

Answer: (b) Urethra.

Question 3.

Reabsorption of water in the kidney is under control of

- (a) ACTH
- (b) LH
- (c) PSH
- (d) ADH.

▼ [Answer](#)

Answer: (d) ADH.

Question 4.

A normal adult excretes urine per day

- (a) 3-4 litres
- (b) 4-5 litres
- (c) 12-15 litres
- (d) 2-3 litres.

▼ [Answer](#)

Answer: (c) 12-15 litres.

Question 5.

Excretory product of mammals is mainly

- (a) Uric acid
- (b) Ammonia
- (c) Urea
- (d) Creatinine.

▼ [Answer](#)

Answer: (c) Urea.

Question 6.

Loop of Henle lies in

- (a) Medulla
- (b) Ureter
- (c) Cortex
- (d) Pelvis.

▼ [Answer](#)

Answer: (a) Medulla.

Question 7.

Removal of amino group from an amino acid is

- (a) Amination
- (b) Excretion
- (c) Deamination
- (d) Defecation.

▼ [Answer](#)

Answer: (d) Defecation.

Question 8.

Glomerular filtrate differs from plasma

- (a) Yellowish colour
- (b) Presence of urea
- (c) Absence of proteins
- (d) Potassium concentration

▼ [Answer](#)

Answer: (c) Absence of proteins.

Question 9.

Glomerular present in glomerular filtrate is reabsorbed in

- (a) Distal convoluted tubule
- (b) Bowman's capsule
- (c) Loop of Henle
- (d) Proximal convoluted tubule.

▼ Answer

Answer: (d) Proximal convoluted tubule.

Question 10.

Nitrogenous wastes are excreted as uric acid in birds to help in

- (a) Elimination of excess heat
- (b) Conservation of body heat
- (c) Reduce the change of kidney stone formation
- (d) Conservation of water inside body.

▼ Answer

Answer: (d) Conservation of water inside body.

Question 11.

Structural and functional unit of kidney is

- (a) Loop of Henle
- (b) Malpighian body
- (c) Glomerular
- (d) Nephron.

▼ Answer

Answer: (d) Nephron.

Question 12.

Glomerular capillaries receive blood having a hydrostatic pressure of

- (a) 80mm Hg.
- (b) 85mm Hg.
- (c) 75mm Hg.
- (d) 90mm Hg.

▼ Answer

Answer: (c) 75 mm. Hg.

Question 13.

Excretion of urea is called

- (a) Ammonotelism
- (b) Uricotelism
- (c) Urination
- (d) Ureotelism.

▼ Answer

Answer: (d) Ureotelism.

Question 14.

In glycosuria, urine contains

- (a) Glucose
- (b) Inorganic ions
- (c) Amino acids
- (d) Epithelial cells.

▼ [Answer](#)

Answer: (a) Glucose.

Question 15.

The major excretory organs in mosquitoes are

- (a) Flame cells
- (b) Nephrons
- (c) Nephridia
- (d) Malpighian tubules.

▼ [Answer](#)

Answer: (d) Malpighian tubules.

Question 16.

Filtration in the nephron is brought about by

- (a) Passive diffusion
- (b) Active transport
- (c) Secretion
- (d) Blood pressure.

▼ [Answer](#)

Answer: (d) Blood pressure.

Question 17.

The plasma resembles in its composition with the filtrate produced in glomerulus except for the presence of

- (a) Amino acids
- (b) Glucose
- (c) Chlorides
- (d) Proteins.

▼ [Answer](#)

Answer: (d) Proteins.

Question 18.

When a person is suffering from poor renal reabsorption which one of the following will not help in maintenance of blood volume?

- (a) Increased ADH secretion
- (b) Decreased arterial pressure in kidneys
- (c) Increased arterial pressure in kidneys
- (d) Decreased glomerular filtration.

▼ Answer

Answer: (c) Increased arterial pressure in kidneys.

Question 19.

In such patients, urea can be removed by a process called

- (a) Uremia
- (b) hemodialysis
- (c) renal failures
- (d) Glomerulonephritis

▼ Answer

Answer: (b) Hemodialysis.

Question 20.

An adult human excretes on an average of urine per day.

- (a) 1 to 1.5 litres
- (b) 2 to 2.5 litres
- (c) 500 gram
- (d) 250 gram

▼ Answer

Answer: (a) 1 to 1.5 litres.

II. Fill in the blanks

Question 1.

....., and are the major forms of nitrogenous wastes excreted by the animals.

▼ Answer

Answer: Ammonia, urea, uric acid

Question 2.

The process of excreting is Ammonotelism.

▼ Answer

Answer: ammonia

Question 3.

..... are the tubular excretory structures of earthworms and other annelids.

▼ Answer

Answer: Nephridia

Question 4.

..... tubules are the excretory structures of most of the insects including cockroaches.

▼ [Answer](#)

Answer: Malpighian

Question 5.

..... perform the excretory function in crustaceans like prawn.

▼ [Answer](#)

Answer: Antennal glands or green glands

Question 6.

In humans, the excretory system consists of,, and

▼ [Answer](#)

Answer: a pair of kidneys, one pair of ureters, a urinary bladder, a urethra

Question 7.

Each kidney of an adult human measures in length,, with an average weight of

▼ [Answer](#)

Answer: 10-12 cm, 5-7 cm in width, 2-3 cm in thickness, 120-170 g

Question 8.

Inside the kidney, there are two zones, an outer cortex and an inner

▼ [Answer](#)

Answer: Irrational

Question 9.

A hairpin shaped Henle's loop is the next part of the tubule which has a

▼ [Answer](#)

Answer: descending and ascending limb

Question 10.

Such nephrons are called nephrons.

▼ [Answer](#)

Answer: cortical

Question 11.

The glomerular capillary blood pressure causes filtration of blood through 3 layers i.e., the the epithelium of Bowman's capsule and a basement membrane between these two layers.

▼ [Answer](#)

Answer: endothelium of glomerular blood vessels

Question 12.

GFR in a healthy individual is approximately

▼ [Answer](#)

Answer: 125ml/minute

Question 13.

Reabsorption of water also occur in the initial segments of the nephron.

▼ [Answer](#)

Answer: passively

Question 14.

Large amounts of water could be reabsorbed conditionally from this region to produce a

▼ [Answer](#)

Answer: concentrated urine.

Question 15.

ANF can cause and thereby the blood pressure.

▼ [Answer](#)

Answer: vasodilation, decrease

III. Mark the statements (T) True or (F) False:

Question 1.

ADH facilitates water reabsorption from latter parts of the tubule, thereby preventing diuresis.

▼ [Answer](#)

Answer: True.

Question 2.

Angiotensin II, being a powerful vasoconstrictor, increases the glomerular blood pressure and thereby GFR.

▼ [Answer](#)

Answer: True

Question 3.

The process of release of urine is called the micturition reflex and the neural mechanisms causing it is called the micturition.

▼ [Answer](#)

Answer: False.

Question 4.

The kidneys, lungs, liver and skin also help in the elimination of excretory wastes.

▼ [Answer](#)

Answer: True.

Question 5.

Our lungs remove large amounts of CO₂ (18 litres/day) and also significant quantities of water every day.

▼ [Answer](#)

Answer: True.

Question 6.

Sweat produced by the sweat glands is a watery fluid containing NaCl. small amounts of urea, lactic acid, etc.

▼ [Answer](#)

Answer: True.

Question 7.

Kidney transplantation is the ultimate method in the correction of acute renal failures (kidney failure).

▼ [Answer](#)

Answer: True.

Question 8.

Stone or insoluble mass of crystallised salts (oxalates) formed within in kidney.

▼ [Answer](#)

Answer: True

Question 9.

Human kidneys can produce urine only one tiitie concentrated than the initial filtrate formed.

▼ [Answer](#)

Answer: False.

Question 10.

NaCl is transported by the descending limb of Henle's loop which is exchanged with the ascending limb of vasa recta.

▼ [Answer](#)

Answer: False.

Question 11.

Collecting duct also plays a role in the maintenance of pH and ionic balance of blood by the selective secretion of H^+ and K^+ ions.

▼ [Answer](#)

Answer: True.

Question 12.

PCT is also capable of reabsorption of HCO_3^- and selective recretion of hydrogen and potassium ions.

▼ [Answer](#)

Answer: False.

Question 13.

The epithelial cells of Bowman's capsule called podocytes are arranged in an intricate manner so as to leave some minute spaces called Alteration slits or slit pores.

▼ [Answer](#)

Answer: True.

Question 14.

The Malpighian corpuscle, PCT and DCT of the nephron are situated in the cortical region of the kidney where as the loop of Henle dips into the medulla.

▼ [Answer](#)

Answer: True.

Question 15.

Antennal glands are the tubular excretory structures of earthworms and other annelids.

▼ Answer

Answer: False.

IV. Match the column I with column II.

Column I	Column II
(a) Aquatic amphibians and aquatic insects are	1. Cockroaches
(b) Reptiles, birds, land snails and insects	2. Prawn
(c) Malpighian tubules	3. Columns of Bertini
(d) Antennal glands or green glands	4. Uricotelic animals.
(e) Meduallary pyramids	5. ammonotelic in nature.
(f) Proximal convoluted tubule	6. Vasodilation and thereby decrease the blood pressure.
(g) Distal convoluted tubule	7. CNS (central nervous system)
(h) glomerular nitration rate	8. in the skin can eliminate certain substances
(i) Vasa recta	9. the renal tubules.
(j) Atrial Natriuretic Factor (ANF) can cause	10. PCT
(k) Stretch receptors on the walls of the bladder send signals to the	11. sodium-potassium balance in blood.
(l) Sweat and sebaceous glands	12. 180 litres per day
(m) Ketone bodies	13. DCT
(n) NH_3 to maintain the pH	14. counter current mechanism
(o) 99 percent of the filtrate has to be reabsorbed by	15. Ketonuria

▼ Answer

Answer:

Column I	Column II
(a) Aquatic amphibians and aquatic insects are	5. ammonotelic in nature.
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(j) Atrial Natriuretic Factor (ANF) can cause	6. Vasodilation and thereby decrease the blood pressure.
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