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) tlreter
(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-i5 litres
(d) 2-3 litres.

▼ Answer

Answer: (c) 12-15 litres.

Question 5.
Excretory product of mammals in 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) Defecaetion.

▼ Answer

Answer: (d) Defecaetion.

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) Inoraganic 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.
Filration 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

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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

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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.
Angtiotensis II, being a powerful vasoconstrictor, increases the glomerular blood pressure and therby 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 CO_2 (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 exretory 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 Facter (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 glends	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.
(b) Reptiles, birds, land snails and insects	4. Uricotelic animals.
(c) Malpighian tubules	1. Cockroaches
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(j) Atrial Natriuretic Facter (ANF) can cause	6. Vasodilation and thereby decrease the blood pressure.
(k) Stretch receptors on the walls of the bladder send signals to the	7. CNS (central nervous system)
(l) Sweat and sebaceous glends	8. in the skin can eliminate certain substances
(m) Ketone bodies	15. Ketonuria
(n) NH_3 to maintain the pH	11. sodium-potassium balance in blood.
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