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TARGET : NEET (UG) 2024

Course : SARANSH (Youtube Live CRASH COURSE)

BIOLOGY
DPP
DAILY PRACTICE PROBLEMS
DPP NO. 1

## ZOOLOGY: EXCRETORY PRODUCTS AND THEIR ELIMINATION

**DPP No. : 1**

**1.** "Columns of Bertini" in the kidney of mammals are formed as the extension of
(1) Medulla into cortex (2) Cortex into medulla
(3) Medulla into pelvis (4) Pelvis into ureter

**2.** Which of the following statements is false?
I. Outer cortex and inner medulla are the two zones in kidney
II. Medulla is divided into renal pyramids
III. Pyramid projects into calyx
IV. Inwards extension of cortex between the pyramids is called renal column of bertini.
(1) I and IV (2) II and IV (3) IV (4) None of these

**3.** How much concentrated urine is produced by the nephron
(1) 4 times (2) 3 times (3) 5 times (4) 6 times

**4.** How much concentrated urine is produced by the nephron
(1) 4 times (2) 3 times (3) 5 times (4) 6 times

**5.** The part of kidney gateway for ureter nerves and blood vessels is-
(1) Hilus (2) Renal pore (3) Minor calyx (4) Major calyx

**6.** Part not belonging to uriniferous tubule is
(1) Glomerulus (2) Henles loop
(3) Distal convoluted tubule (4) Collecting tubule

**7.** The glomerular filtrate i.e., the liquid collected in the cavity of Bowman's capsule is
(1) Blood minus proteins (2) Blood minus proteins and corpuscles
(3) Water (4) Urine

**8.** Brush border is characteristic of
(1) Neck of nephron (2) Collecting tube
(3) Proximal convoluted tubule (4) All of the above

**9.** Which of the following statements are absolutely correct?
I. The Malpighian corpuscle, PCT and DCT of the nephron are situated in the medullary region of the kidney
II. In majority of nephrons, the loop of Henle is too short and extends only very little into the medulla.
III. In juxta medullary nephrons the loop of Henle is very long and runs deep into the medulla.
IV. The afferent arteriole emerge from the glomerulus and forms a fine capillary network around the renal tubule called the peritubular capillaries
V. **Vasa recta** is absent or highly reduced in juxtamedullary nephrons.
(1) II and III (2) I, II and V (3) II, III and IV (4) III only

**10.** What causes the liquid part of the blood to filter out from the glomerulus into the renal tubule?
(1) Osmosis (2) High (hydrostatic) pressure
(3) Diapedesis (4) Dialysis

**11.** A large quantity of fluid is filtered every day by the nephrons in the kidneys. Only about 1% of it is excreted as urine. The remaining 99% of the filtrate
(1) is stored in the urinary bladder (2) is reabsorbed into the blood
(3) gets collected into the renal pelvis (4) is lost as sweat

**12.** In comparison to blood plasma, percentage of glucose in glomerular filtrate is :
(1) Higher (2) Equal (3) Lower (4) Nil

**13.** Mark the **incorrectly** matched pair for the events involved in formation of urine–
(1) Ultrafiltration – Passive and nonselective process
(2) Reabsorption – Glucose, amino acids, some cations etc. in PCT by active transport
(3) Reabsorption – $Na^+$ and $Cl^-$ in DCT by passive transport
(4) Secretion – Helps to maintain the ionic acid base balance to body fluids

**14.** Find the incorrect statement regarding mechanism of urine formation in man
(1) The glomerular filtration rate is about 125 ml per minute
(2) The ultrafiltration is opposed by the colloidal osmotic pressure of plasma
(3) Tubular secretion takes place in the PCT
(4) The counter current system contribute in diluting the urine

**15.** Which one plays an important role in counter current mechanism?
(1) Vasa recta (2) PCT (3) Loop of Henle (4) (1) and (3)

**16.** NaCl is transported by the ascending limb of Henle's lop which is exchanged with
(1) DCT (2) PCT
(3) Ascending limb of vasa recta (4) Descending limb of vasa recta

**17.** Find out the correct statement :
(1) An increase in body fluid volume, stimulate the ADH release
(2) A fall in glomerular blood flow can activate the JG cells to release renin
(3) Angiotensin-II, being a powerful vasodialator, decreases the glomerular blood pressure
(4) Decrease in blood flow to the atria of the heart can cause the release of atrial natriuretic factor(ANF)

**18.** Which one of the following statements is correct with respect to kidney function regulation?
(1) When someone drinks lot of water, ADH release is suppressed.
(2) Exposure to cold temperature of body stimulates release of ADH
(3) An increase in glomerular blood flow stimulates formation of Angiotensin II.
(4) During summer when body loses lot of water by evaporation, the release of ADH is suppressed.

**19.** The reabsorption of Na+ in the DCT of nephron is under the control of a hormone
(1) Renin (2) Angiotensin-II (3) Aldosterone (4) ADH

**20.** **Assertion:** Vasa recta is absent or highly reduced in cortical nephrons.
**Reason:** Vasa recta is source of renin, which is responsible for increasing blood pressure.
(1) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion
(2) If both Assertion and Reason are true but the Reason is not the correct explanation of the Assertion
(3) If Assertion is true but Reason is false
(4) If both Assertion and Reason are false