

# Yakeen NEET 2.0 2026

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## Excretory Products & their Elimination

DPP: 4

- Q1** The U-shaped minute vessel that runs parallel to the Henle's loop is  
 (A) Collecting duct  
 (B) Vasa recta  
 (C) Glomerulus  
 (D) None of the above
- Q2** Which of the following regions plays a significant role in the maintenance of high osmolarity of medullary interstitial fluid?  
 (A) PCT  
 (B) DCT  
 (C) Henle's loop  
 (D) Collecting duct
- Q3** *Vasa recta* is minute vessel of peritubular capillaries network, which:  
 (A) also known as juxta-glomerular apparatus.  
 (B) runs parallel to loop of Henle.  
 (C) runs parallel to PCT.  
 (D) runs parallel to DCT.
- Q4** The counter-current mechanism operates in  
 (A) In Ascending and descending limb of vasa recta  
 (B) In Ascending limb of Henle's loop  
 (C) In Descending limb of Henle's loop  
 (D) Both loop of Henle and vasa recta
- Q5** The flow of filtrate in the two limbs of Henles loop is in..... directions and thus forms a counter-current  
 (A) Same (B) Opposite  
 (C) Upward (D) Downward
- Q6** Which factor helps in maintaining an increasing osmolarity towards the inner medullary interstitium?  
 a. Counter-current pattern in vasa recta  
 b. Counter-current pattern in Henles loop  
 c. Proximity between the Henles loop and vasa recta  
 (A) a & b (B) a, b & c  
 (C) c only (D) a & c
- Q7** Osmolarity in  $\text{mOsmolL}^{-1}$  in the outer cortex and inner medulla region is  
 (A) 300 and 900, respectively  
 (B) 600 and 300, respectively  
 (C) 1200 and 300, respectively  
 (D) 300 and 1200, respectively
- Q8** The maintenance of concentration gradient in the medullary interstitium is mainly done by  
 (A) Glucose and  $\text{Na}^+$   
 (B)  $\text{NaCl}$  and urea  
 (C) Amino acids and creatinine  
 (D)  $\text{Na}^+$  and  $\text{Ca}^{2+}$
- Q9**  $\text{NaCl}$  is transported by ascending limb of Henles loop which is exchanged with  
 (A) DCT  
 (B) PCT  
 (C) Ascending limb of vasa recta  
 (D) Descending limb of vasa recta
- Q10**  $\text{NaCl}$  is returned to the interstitium by  
 (A) Ascending portion of Henle's loop  
 (B) Ascending portion of vasa recta  
 (C) Descending portion of Henle's loop  
 (D) Descending portion of vasa recta
- Q11** Which feature enables the mammalian kidney to concentrate urine in the medullary region?



- (A) Rapid removal of sodium ions from medullary tissues  
 (B) Maintaining a high osmotic pressure in the tissues between the tubules  
 (C) High oxidative metabolism of medullary cells  
 (D) Rapid flow of blood through the medulla
- Q12** Which of the following facilitates the transport of substances like NaCl and urea?  
 (A) Henle's loop  
 (B) Vasa recta  
 (C) Collecting tubule  
 (D) Both (A) & (B)
- Q13** Counter-current mechanism helps to produce concentrating urine in animals and mainly operates on  
 (A) Henle's loop  
 (B) Vasa recta  
 (C) Collecting tubule  
 (D) Both (A) & (B)
- Q14** Assertion (A): Human kidneys can produce urine nearly four times concentrated than the initial filtrate formed.  
 Reason (R): Presence of interstitial gradient helps in an easy passage of water from the collecting tubule thereby concentrating the urine/filtrate.  
 (A) Both Assertion (A) and Reason (R) are true and the Reason (R) is a correct explanation of the Assertion (A).  
 (B) Both Assertion (A) and Reason (R) are true but Reason (R) is not a correct explanation of the Assertion (A).  
 (C) Assertion (A) is true but the Reason (R) is false.  
 (D) Assertion (A) is false but the Reason (R) is true.
- Q15** Micturition is  
 (A) Removal of faecal matter  
 (B) Removal of  $\text{NH}_3$   
 (C) Removal of urea  
 (D) Removal of urine
- Q16** In micturition;

- (A) ureters contracts  
 (B) urethral sphincter contracts  
 (C) urethral sphincter relax  
 (D) ureters relax

**Q17 Statement-I:** For micturition, the CNS passes on motor messages to initiate the contraction of smooth muscles of the bladder and simultaneous relaxation of urethral sphincter.

**Statement-II:** Stretch receptors on the wall of urinary bladder send signal to the CNS for micturition.

- (A) Statement I is incorrect, but Statement II is correct.  
 (B) Statement I is correct, but Statement II is incorrect.  
 (C) Statement I and Statement II both are correct.  
 (D) Statement I and Statement II both are incorrect.

**Q18** The outline of principal event of urination is given below in unordered manner  
 I. Stretch receptors on the wall of urinary bladder send signal to the *CNS*  
 II. The bladder fills with urine and becomes distended  
 III. Micturition  
 IV. CNS passes on motor messages to initiate the contraction of smooth muscles of bladder and simultaneous relaxation of urethral sphincter.  
 The correct order of steps for urination is  
 (A) II  $\rightarrow$  I  $\rightarrow$  IV  $\rightarrow$  III  
 (B) IV  $\rightarrow$  III  $\rightarrow$  II  $\rightarrow$  I  
 (C) II  $\rightarrow$  I  $\rightarrow$  III  $\rightarrow$  IV  
 (D) III  $\rightarrow$  II  $\rightarrow$  I  $\rightarrow$  IV

**Q19** On an average, how much urea is excreted out per day by an adult human?  
 (A) 25 – 30 g  
 (B) 15 – 20 g  
 (C) 35 – 40 g  
 (D) 40 – 45 g

**Q20** An adult human excretes on an average \_\_\_\_\_ litres of urine per day



- (A) 1 to 1.5                      (B) 2 to 2.5  
(C) 2.5 to 3                      (D) 3 to 3.5

**Q21** The pH of human urine is approximately

- (A) 6.5                      (B) 7  
(C) 6                      (D) 7.5



## Answer Key

Q1 (B)

Q2 (C)

Q3 (B)

Q4 (D)

Q5 (B)

Q6 (B)

Q7 (D)

Q8 (B)

Q9 (D)

Q10 (B)

Q11 (B)

Q12 (D)

Q13 (D)

Q14 (A)

Q15 (D)

Q16 (C)

Q17 (C)

Q18 (A)

Q19 (A)

Q20 (A)

Q21 (C)



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