NEET - C17 - EXCRETION IN ANIMALS

1. Juxtaglomerular apparatus is made up of

- A. juxtaglomerular cell, macula densa and lacis cell
- B. juxtaglomerular cell, Purkinje cell and chief cell
- C. juxtaglomerular cell, lads cell and myoepithelial cell
- D. juxtaglomerular cell, macula densa and argentaffin cell

2. Read the sentences below and choose the correct option for the sequence of steps in haemodialysis.

- I. Blood is returned to the body through radial vein,
- II. Blood from radial artery is pumped into a tube that runs through the dialyser.
- III. Blood is dialysed across a semipermeable membrane

$$A.I \rightarrow II \rightarrow JM$$

$$C. III \rightarrow II \leftrightarrow I$$

$$D. \parallel \rightarrow \downarrow \rightarrow \parallel$$

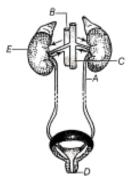
3. Which of the following is correct with reference to haemodialysis?

- A. Absorbs and resends excess of ions
- B. The dialysis unit has a coiled cellophane tube
- C. Blood is pumped back through a suitable artery after haemodialysis
- D. Antiheparin is added prior to haemodialysis

4. Vasopressin released from the neurohypophysis is mainly responsible for

- A. facultative reabsorption of water through Henle's loop
- B. obligatory reabsorption of water through Bowman's capsule
- C. facultative reabsorption of water through DCT
- D. obligatory reabsorption of water through PCT

5. Identify A to E in the given structure and choose the correct option.



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A. A-Ureter B-Dorsal aorta C-Inferior vena cava D-Urethra
B. A-Ureter B-Inferior vena cava C-Dorsal aorta D-Pelvis,
C. A-Ureter B-Inferior vena cava C-Dorsal aorta D-Urethra E-Kideny
D. A-Ureter B-Inferior vena cava C-Pelvis D-Dorsal aorta E-Urethra

6. The principal nitrogenous excretory compound in humans is synthesised

- A. in kidneys, but eliminated mostly through liver
- B. in kidneys as well as eliminated by kidneys
- C. in liver and also eliminated by the same through bile
- D. in the liver, but eliminated mostly through kidneys
- 7. Which of the following are correct statements? I. Angiotensin-II, being a powerful vasoconstrictor, increases glomerular pressure and thereby GFR.
 - II. Angiotensin-Il activates the adrenal cortex to release aldosterone.
 - III. aldosterone promotes reabsorption of Na and water from the DCT and CT leading to an increase in GBP and GFR.
 - IV ANF causes vasoconstriction
 - A. I, II and IIL

B. I, II and IV

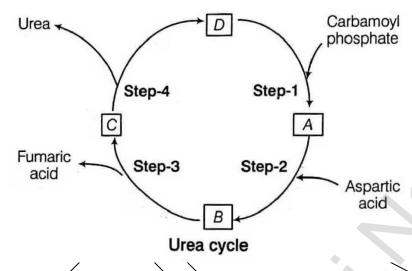
C. I, III and IV

D. II, III and V

- 8. If Henle's loop is absent from mammalian nephron, which of the following is to be expected?
 - A. The urine will be more concentrated
 - B. The urine will be more dilute
 - C. There will be no urine formation
 - D. There will be hardly any change in the quality and quantity of urine formed
- 9. Order of toxicity among ammonia, urea and uric acid (from lower to higher) is
 - A. uric acid < urea < ammonia B. uric acid < ammonia < urea
 - C. urea < uric acid <ammonia D. ammonia < urea < uric acid
- 10. Uric acid is the excretory waste of
 - A. adult amphibians B. birds
 - C. amphibian larvae D. mammals

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11. Pick out the correct labelling of A, B, C and D.



- A. A-Ornithine B-Citrulline C-Argininosuccinic acid D-Arginine
- B. A-Ornithine B-Arginine C-Citrulline Q-Argininosuccinic acid
- C. A-Argininosuccinic acid B-Arginine C-Omithine D-Citrulline
- D. A-Citrulline B-Argininosuccinic acid C-Arginine D-Ornithine

12. The renal fluid isotonic to the cortical fluid and blood is found in

- A. the collecting duct and ascending limb
- B. the distal convoluted tubule and ascending limb
- C. the proximal convoluted tubule and distal convoluted tubule
- D. the ascending limb and descending limb

13. What is the Glomerular Filtration Rate (GFR) of human?

- A. 100 mL/min B. 105 mL/mm
- C. 125 mL/min D. 180 mL/min

14. The structural and functional unit of kidney is called

- A. uriniferous tubule B. renal pyramid
- C. renal tubule D. renal medulla

15. Choose the correct statement.

- A. The juxtamedullary nephron have reduced Henle's loop
- B. Vasa recta is well developed in cortical nephrons
- C. The POT and DCT are situated in the medulla of the kidney
- D. The ascending limb of the Henle's loop extends as the DOT

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16. Which of the following is not a part of Malpighian body?

- A. Bowman's capsule
- B. Glomerulus
- C. Loop of Henle
- D. Afferent arteriole

17. In each of the question below, a statement a Assertion is given followed by corresponding statement of Reason. Of the statements mark the correct answer as

Assertion - In the descending limb of loop of Henle, the urine is hypertonic.

Reason - Descending limb is impermeable to Na+, while ascending limb is impermeable to H₂Q.

A. both Assertion and Reason are correct and the Reason is the correct explanation of Assertion

- B. both Assertion and Reason are correct but Reason is not the correct explanation of Assertion
- C. Assertion is correct, but Reason is incorrect
- D. Assertion is incorrect and Reason is correct

18. Which one is the correct formula of calculating Net Filtration Pressure (NFP)?

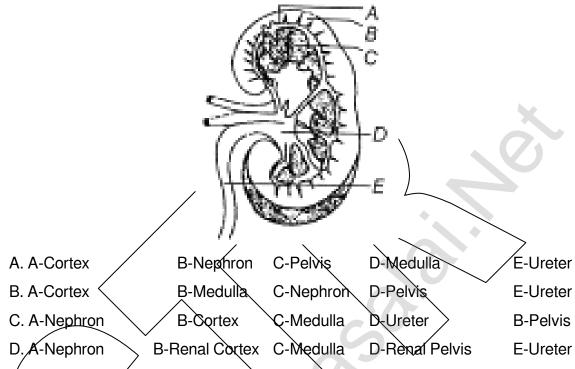
- A. NFP = GHP + (BCOP + CHP)
- B. NFP = GHP (BQOP + QHP)
- C. NFP = GHP (CHP BCOP)
- D. NFP = GHP (CHP + BCOP)

19. Which one of the following statement with regard to the excretion by the human kidney is correct?

- A. Descending limb of loop of Henle impermeable to water
- B. Distal convoluted tubule is incapable of reabsorhing HCO₃
- C. Nearly 90% of the glomerular filtrate is reabsorbed by the renal tubules
- D. Ascending limb of loop of Henle is impermeable to electrolytes

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20. Refer to the diagram below and identify the parts of kidney indicated as A to E.



21. Find the incorrect option regarding mechanism of urine formation in man.

- A. The glomerular filtration rate is about 125 mL/min
- B. The ultrafiltration is opposed by the colloidal osmotic pressure of plasma
- C. Tubular secretion takes place in the PCT
- D. The counter-current system contributes in diluting the urine

22. Match the following columns.

Column I	Column II		
A. Epithelial cells of Bowman's capsule	Juxtamedullary nephron		
B. Extension of cortex between the	2. Vasa recta		
medullary pyramids as renal columns			
C. Nephrons with long loop of Henle running	3. Juxtaglomerular apparatus		
deep into the medulla.			
D. A fine vessel of the peritubular capillaries	4. Podocytes		
running parallel to Henle's loop			
E. A special sensitive region in the DCT and	5. Columns of Bertini		
afferent arteriole at the location of their			
contact.			
	6. Cortical nephron		

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	Α	В	С	D	Е
A.	3	2	1	4	5
B.	5	1	2	3	4
C.	4	3	6	5	1
D	4	6	1	2	3

23. Which of the following Statements is are true?

- I. When the urine passes into collecting tubule it becomes, hypotonic.
- II. Urine is isotonic in proximal convoluted tubule and distal convoluted tubule.
- III. Urine becomes more and more hypotonic as ii passes through Henle's loop.

Choose the correct option.

A. I and II

B. Qnly II

C. II and III

D. I, II and III

24. Glucose, Nat and amino acid are actively transported substances, because

- A. their movement occurs according to concentration gradient
- B. their movement occurs against concentration gradient
- ¢. ATP is not needed for transportation.
- D. They are transported by simple diffusion
- 25. In each of the question below, a statement a Assertion is given followed by

corresponding statement of Reason. Of the statements mark the correct answer as Assertion Inner lining of Bowman's capsule is lined by macula densa.

Reason It bears slit pores through which the glomerular filtrate gets filtered.

- A. both Assertion and Reason are correct and the Reason is the correct explanation of Assertion
- B. both Assertion and Reason are correct but Reason is not the correct explanation of Assertion
- C. Assertion is correct, but Reason is incorrect
- D. Assertion is incorrect and Reason is correct

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1. A	2. B	3. B	4. C	5. C
6. D	7. A	8. B	9. A	10. B
11. D	12. C	13. C	14. A	15. D
16. C	17. A	18. B	19. C	20. D
21 D	22 D	23 B	24 B	25 D