DPP
DAILY PRACTICE PROBLEMS

Class : XIth
Date :

Solutions

Subject : BIOLOGY
DPP No. : 5

Topic :- Excretory Products & Their Elimination

1 **(d)**
A – afferent atriole
B – efferent atriole

2 **(d)**
Both (a) and (b).
Juxta-glomerular apparatus (JGA) operates a multihormonal Renin-angiotensin-Aldosterone System (RAAS. JGA release an enzyme renin in the blood, which initiates chemical reactions that produces angiotensin-II, a potential stimulator of aldosterone (mineralocorticoids) release by the glomerulosa cell. It increases blood pressure, blood volume and completes the feedback circuit by supporting the release of renin

3 **(b)**
Nephritis The infection is caused by bacteria (streptococci) which results in inflammation of kidney that involve glomerulus

4 **(c)**
Ammonia is converted into urea through urea cycle or Krebs-Henseleit cycle in liver.

5 **(a)**
Solenocytes are excretory structures similar to flame cells but supplied with blood vessels for picking up excretory products present in some invertebrates and lower chordates.

6 **(b)**
Tadpole of frog, excretes ammonia as a waste product, called ammonotelic and this phenomenon is called ammonotelism, whereas adult frog, excretes urea as a waste product, called ureotelic and the phenomenon is called ureotelism.

7 **(d)**
Accessory excretory organs are the organs, which have their own specific functions but carry out excretion as a secondary activity, *e.g.*, lung, skin, liver

8 **(d)**
The Juxtaglomerular cells of kidney produce a peptide hormone called erythropoietin which stimulates erythropoiesis (formation of RBCs).

9 **(a)**
A – JG cells
B – Renin

C – angiotensin-I
D – angiotensin-II

10 **(c)**
From the distal convoluted tubule, the filtrate enters the collecting tubule, where further reabsorption of water takes place. Now the filtration become more concentrated which place. Now the filtration become more concentrated which makes the filtrate hypertonic. When the collecting duct become less permeable to water it produces more dilute urine.

11 **(c)**
The excretory material of bony fishes like *Hippocampus* is ammonia. So, bony fishes are ammonotelic.

12 **(b)**
Urine consists of water and organic and inorganic substances. It is hypertonic to blood. The medullarly part of kidney possesses loop of Henle, which has fluid that is hypertonic to blood plasma but isotonic to urine.

13 **(d)**
ADH, Renin angiotensin, ANF, countercurrent mechanism all of them plays a significant role in osmoregulation of body fluids

14 **(b)**
When blood from cortex goes through the descending loop, it loses water and gain salts and salutes. As blood ascends, the reverse occurs and it gains water and gradually loses salts and solutes

15 **(c)**
Filtration takes place through tiny spaces amongst the cells of capillary walls and filtration slits of podocytes in Bowman's capsule.
Ultrafiltrate is plasma minus protein. Loop of Henle concentrate the urine counter current mechanism

16 **(b)**
The correct process of urine formation in the given figure are-
A-Pressure filtration
B-Reabsorption
C-Secretion
D-Collection of urine

17 **(b)**
Ornithine cycle or urea cycle or Krebs-Henseleit cycle was discovered by Hans Krebs and Kurt Henseleit. It takes place in liver cells. The main component of ornithine cycle are arginine, ornithine and citrulline.

18 **(b)**
Collecting duct
(i) This is the long ducts extends from cortex of the kidney to the inner parts of medulla
(ii) Large amount of water reabsorbed from this region

(iii) Concentrated urine production takes place

19 **(d)**

During urine formation, salts and other wasters are dissolved in the filtrate and pass with it out of the kidney as urine. But sometimes, certain salts (such as calcium oxalate) do not dissolved and form crystals called **calcium stones**. These can partially block the flow of the urine from the kidney.

20 **(a)**

Anuria Happens when failure of kidney to form urine

ANSWER-KEY										
Q.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A.	**D**	**D**	**B**	**C**	**A**	**B**	**D**	**D**	**A**	**C**
Q.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
A.	**C**	**B**	**D**	**B**	**C**	**B**	**B**	**B**	**D**	**A**