

NEET BIOLOGY 2018-19 - Chennai

Periodic Test : 16

Test ID : 028

Number of questions: 150

Test date: 05.04.2019

Name: _____

Time: 3HRS

ID No: _____

Negative Marks : 4 marks for correct attempt & 1 mark deducted for every wrong attempt.

- A decrease in blood pressure/ volume will not cause the release of
 - Atrial natriuretic factor
 - Aldosterone
 - ADH
 - Renin
- Which of the following statements is correct?
 - The descending end of loop of Henle is impermeable to water
 - The ascending end of loop of Henle is permeable to water
 - The descending end of loop of Henle is permeable to electrolytes
 - The ascending end of loop of Henle is impermeable to water
- The part of nephron involved in active reabsorption of sodium is
 - Distal convoluted tubule
 - Proximal convoluted tubule
 - Bowman's capsule
 - Descending limb of Henle's loop
- Human urine is usually acidic because
 - Potassium and sodium exchange generates acidity
 - Hydrogen ions are actively secreted into the filtrate
 - The sodium transporter exchanges one hydrogen ion for each sodium ion, in Peritubular capillaries
 - Excreted plasma proteins are acidic
- Which of the following does not favour the formation of large quantities of dilute urine?
 - Renin
 - Atrial-natriuretic factor
 - Alcohol
 - Caffeine
- Removal of proximal convoluted tubule from the nephron will result in
 - No change in quantity and quality of urine
 - No urine formation
 - More diluted urine
 - More concentrated urine
- Which of the following causes an increase in sodium reabsorption in the distal convoluted tubule?
 - Increase in aldosterone levels
 - Increase in antidiuretic hormone level
 - Decrease in aldosterone levels
 - Decrease in antidiuretic hormone levels
- Select the option which shows correct matching of animals with its excretory organ and excretory product.

Animal	Excretory Organ	Excretory Product
a) Labeo (Rohu)	Nephridial tubes	ammonia
b) Salamander	Kidneys	Urea
c) Peacock	Kidneys	Urea
d) Housefly	Renal tubules	Uric Acid

9. The maximum amount of electrolytes and water (70-80 percent) from the glomerular filtrate is reabsorbed in which part of the nephron?
- Ascending limb of loop of Henle
 - Distal convoluted tubule
 - Proximal convoluted tubule
 - Descending limb of loop of Henle

10. Which one of the following options gives the correct categorization of six animals according to the type of nitrogenous waste they give out?

Ammonotelic	Ureotelic	Uricotelic
a) Pigeon, humans	Aquatic amphibian, Lizards	Cockroach, frog
b) Frog, Lizards	Aquatic amphibian, Humans	Cockroach, pigeon
c) Aquatic amphibian Frog, Humans		Pigeon, Lizards, Cockroach
d) Aquatic amphibian	Cockroach, humans	Frog, Pigeon, Lizards

11. A fall in glomerular filtration rate (GFR) activates
- Juxtaglomerular cells to release rennin
 - Adrenal cortex to release aldosterone
 - Adrenal medulla to release adrenaline
 - Posterior pituitary to release vasopressin
12. Which one of the following characteristics is common both in humans and adult frogs?
- Four chambered heart
 - Internal fertilization
 - Nucleated RBCs
 - Ureotelic mode of excretion

13. Which one of the following is not a part of renal pyramid?
- Peritubular capillaries
 - Convoluted tubules
 - Collecting Ducts
 - Loop of Henle

14. Which one of the following correctly explains the function of specific part of a human nephron?

- Podocytes : create minute spaces (slit pores) for the filtration of blood into the Bowman's capsule
- Henle's loop: most reabsorption of the major substances from the glomerular filtrate
- Distal Convoluted tubule: reabsorption of K^+ ions into the surrounding blood capillaries
- Afferent arteriole : carries the blood away from the glomerular towards renal vein

15. Which one of the following statements is correct with respect to kidney function regulation?

- When someone drinks lot of water, ADH release is suppressed
- Exposure to cold temperature stimulates ADH release
- An increase in glomerular blood flow stimulates formulation of angiotensin II.
- During summer when body loses lot of water by evaporation, the release of ADH is suppressed.

16. Uricotelic mode of excreting nitrogenous wastes is found in

- Reptiles and birds
- Birds and annelids
- Amphibians and reptiles
- Insects and amphibians

17. Which one of the following statements in regard to the excretion by the human kidneys is correct?
- Descending limb of loop of Henle is impermeable to water
 - Distal convoluted tubule is incapable of reabsorbing HCO_3^-
 - Nearly 99 percent of the glomerular filtrate is reabsorbed by the renal tubules
 - Ascending limb of loop of Henle is impermeable to electrolytes
18. The principal nitrogenous excretory compound in human synthesized
- In kidneys but eliminated mostly through liver
 - In kidneys as well as eliminated by kidneys
 - In liver and also eliminated by the same through bile
 - In the liver, but eliminated mostly through kidneys
19. What will happen if the stretch receptors of the urinary bladder wall are totally removed?
- Micturition will continue
 - Urine will continue to collect normally in the bladder
 - There will be no micturition
 - Urine will not collect in the bladder
20. Uric acid is the chief nitrogenous component of the excretory products of
- Earthworm
 - Cockroach
 - Frog
 - Man
21. A person who is on a long hunger strike and is surviving only on water, will have
- Less amino acids in his urine
 - More glucose in his blood
 - Less urea in his urine
 - More sodium in his urine
22. Angiotensinogen is a protein produced and secreted by
- Juxtaglomerular (JG) cells
 - Macula densa cells
 - Endothelial cells (cells lining the blood vessels)
 - Liver cells
23. In ornithine cycle, which of the following wastes are removed from the blood?
- CO_2 and urea
 - Ammonia and urea
 - CO_2 and ammonia
 - Urea and urine
24. The net pressure gradient that causes the fluid to filter out of the glomeruli into the capsule is
- 50 mm Hg
 - 75 mm Hg
 - 20 mm Hg
 - 30 mm Hg
25. A person is undergoing prolonged fasting. His urine will be found to contain abnormal quantities of
- Fats
 - Amino acids
 - Glucose
 - Ketones

26. If Henle's loop were absent from mammalian nephron, Which one of the following is to be expected?
- There will be no urine formation
 - There will be hardly any changes in the quality and quantity of urine formed
 - The urine will be more concentrated
 - The urine will be more dilute
27. Conversion of ammonia to urea is done by
- Ornithine cycle
 - Arginine cycle
 - Fumaric cycle
 - Citrulline cycle
28. Concentration of urine depends upon which organ?
- Bowman's capsule
 - Length of Henle's Loop
 - PCT
 - Network of capillaries arising from glomerulus
29. A condition of failure of kidney to form urine is called
- Anuria
 - Deamination
 - Uremia
 - None of these
30. The basic functional unit of human kidney is
- Nephridia
 - Henle's loop
 - Nephron
 - Pyramid
31. In ureotelic animals, urea is formed by
- Krebs' cycle
 - EM pathway
 - Ornithine cycle
 - Cori cycle
32. The ornithine cycle removes two waste products from the blood in liver. These products are
- CO₂ and ammonia
 - Ammonia and uric acid
 - CO₂ and urea
 - Ammonia and urea
33. Which one of the four parts mentioned below does not constitute a part of single uriniferous tubule?
- Distal convoluted tubule
 - Collecting duct
 - Bowman's capsule
 - Loop of Henle
34. If excess water passes out from the tissue without being restored by the kidneys, the cells would
- Burst open and die
 - Take water from the plasma
 - Not be affected at all
 - Shrivel and die
35. Glucose is taken back from glomerular filtrate through
- Active transport
 - Passive transport
 - Osmosis
 - Diffusion
36. Nitrogenous waste products are eliminated mainly as
- Urea in tadpole and ammonia in adult frog
 - Ammonia in tadpole and urea in adult frog
 - Urea in both tadpole and adult frog
 - Urea in tadpole and uric acid in adult frog

37. Under normal conditions which one is completely reabsorbed in the renal tubule?

- a) Urea
- b) Uric acid
- c) Salts
- d) Glucose

38. Proximal and distal convoluted tubules are parts of

- a) Seminiferous tubules
- b) Nephron
- c) Oviduct
- d) Vas deferens

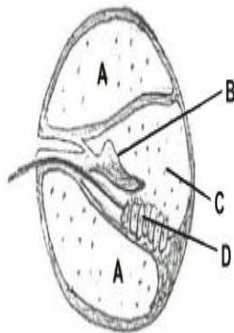
39. Brush border is characteristic of

- a) Neck of nephron
- b) Collecting tube
- c) Proximal convoluted tubule
- d) All of the above

40. Reabsorption of useful substances from glomerular filtrate occurs in

- a) Collecting tube
- b) Loop of Henle
- c) Proximal convoluted tubule
- d) Distal convoluted tubule

41. Given below is a diagrammatic cross section of a single loop of human cochlea.



Which one of the following options correctly represents the name of three different parts?

- a) D: Sensory hair cells, A: Endolymph, B: Tectorial membrane
- b) A: perilymph, B: Tectorial membrane, C: endolymph
- c) B: tectorial membrane, C: perilymph, D: secretory cells
- d) C: Endolymph, D: sensory hair cells, A: Serum

42. Which one of the following is the correct difference between rod cells and cone cells of retina?

	Rod cells	Cone cells
a) Overall function	Vision in poor light	Colour vision and detailed vision in bright light
b) Distribution	More concentrated in centre of retina	Evenly distributed all over retina
c) Visual acuity	High	Low
d) Visual pigment	Rhodopsin	Rhodopsin

43. During the transmission of nerve impulse through a nerve fibre, the potential on the inner side of the plasma membrane has which type of electric change?

- a) First negative then positive and continue to be positive
- b) First positive, then negative and continue to be negative
- c) First positive, then negative and again back to positive
- d) first negative, then positive and again back to negative

44. Bowman's glands are located in the
- Anterior pituitary
 - Female reproductive system of cockroach
 - Olfactory epithelium of our nose
 - proximal end of uriniferous tubules
45. Bowman's glands are found in
- juxtamedullary nephrons
 - olfactory epithelium
 - external auditory canal
 - cortical nephrons only
46. Which one of the following does not act as a neuro transmitter?
- Cortisone
 - Acetylcholine
 - epinephrine
 - norepinephrine
47. Which one of the following is the example of the action of the autonomous nervous system?
- Swallowing of food
 - pupillary reflex
 - peristalsis of the intestine
 - knee-jerk response
48. In a man, abducens nerve is injured. Which one of the following functions will be affected?
- movement of the eyeball
 - movement of the tongue
 - swallowing
 - movement of the neck
49. Parkinson's disease (characterized by tremors and progressive rigidity of limbs) is caused by degeneration of brain neurons that are involved in movement control and make use of neurotransmitter.
- acetylcholine
 - norepinephrine
 - dopamine
 - GABA
50. In the resting state of the neural membrane, diffusion due to concentration gradients, if allowed, would drive
- K^+ into the cell
 - K^+ and Na^+ out of the cell
 - Na^+ into the cell
 - Na^+ out of the cell