

BIOLOGY

BOOKS - NIKITA PUBLICATION

EXCRETION AND OSMOREGULATION

Exercise

1. The term excretion mainly refers to

A. Remove of wastes from the body

B. Removal of nitrogenous wastes from the
body
C. Formation of nitrogenous wastes in the

D. Deamination of amino acids

Answer:

body



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2. Nitrogenous waste are produced during

- A. Protein metabolism
- B. Carohydrate metabolism
- C. Fat metabolism
- D. All of these



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3. The primary nitrogenous waste produced in

Liver is

A. Ammonia
B. Urea
C. Uric acid
D. a and b
Answer:
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4. Ammonotelism mainly found in
A. Aquatic invertebrates

- B. Bony fishes
- C. a and b
- D. Semi aquatic animals



- **5.** Tadpole larva is
 - A. Ammonotelic
 - B. Ureotelic

- C. Uricotelic
- D. Both a and b



- **6.** Urea is synthesized from
 - A. Amino acids
 - B. Ammonia
 - C. uric acid

D. Carbohydrate

Answer:



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7. Turtle, toad, marine fishes etc. are

A. Ammonotelic

B. Ureotelic

C. Uricotelic

D. a and b



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- 8. Uric acid synthesis occurs by
 - A. Transamination
 - **B.** Deamination
 - C. Ornithine cycle
 - D. Inosinic pathway

Answer:

- 9. Uricotelism is an adaptation for
 - A. Conservation of heat
 - B. Conservation of water
 - C. Conservation of energy
 - D. a and b



10. Uricotelism is found in

- A. Snail an Lizard
- B. Insect and whale
- C. Camel and Desert rat
- D. All of these

Answer:



11. Man excrete small amount of

- A. Ammonia
- B. Urea
- C. Uric acid
- D. Guanine

Answer:



12. Guanotelism is found in

- A. Spiders
- **B.** Scorpions
- C. Penguins
- D. All

Answer:



- 13. Deamination is a process in which
 - A. Poisonous urea is removed and it occurs in kidneys
 - B. Amino acids are absorbed from digested food, and occurs in intestinal villi
 - C. Amino acids are broken down to produce urea and occurs in liver
 - D. Amino acids are synthesized and it occurs in ribosomes.



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14. The animal which retains urea for hypertonicity is

- A. Man
- B. Bird
- C. Scoliodon
- D. Frog



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15. Which one is most souluble in water

A. Uric acid

B. Urea

C. Fatty acids

D. Casein

Answer:

16. Which of the following sets of animals produce the same substance as their chief excretory product.

- A. Fish, Pigeon and frog
- B. Camel, Housfly and snake
- C. Frog, Monkey and Dog
- D. Amoeba, Ant and Antelope

Answer:

17. In reptiles, uric acid is stored in

A. Fat bodies

B. Liver

C. Anus

D. Cloaca

Answer:



18. The excretory product of excess metabolism of creatine is

- A. Creatinine
- B. Urea
- C. Uric acid
- D. Oxalic acid

Answer:



19. Centipedes and millipedes excrete

- A. Ammonia
- B. Urea
- C. Uric acid
- D. Amino acid

Answer:



20. bony fish and starfish can eliminate metabolic waste as

- A. Ammonia
- B. Urea
- C. Guanine
- D. Uric acid

Answer:



21. African toad and lung fishes are normally
A. Ureotelic
B. Uricotelic
C. Ammonotelic
D. Guanotelic
Answer:
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22. Human kidneys are found attached to
==: Harrian Marieys are round accached to

B. Dorsal body wall C. Lateral body wall D. Ventrolateral body wall **Answer: Watch Video Solution** 23. The kidneys are A. Peritoneal

A. Ventral body wall

- B. Extra peritoneal
- C. Intraperitoneal
- D. Retro peritoneal



- **24.** Kidneys are
 - A. Ectodermal in origin
 - B. Mesodermal in origin

- C. Endodermal in origin
- D. Ecto endodermal in origin



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25. Openings of ureters in the bladder is guarded by

- A. No valves
- B. A pair of valves

- C. Two pair of valves
- D. A pair of sphincters



- **26.** Internally urinary bladder is lined by
 - A. Detrusor muscles
 - B. Transitional epithelium
 - C. Dartos muscle

D. a and b

Answer:



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27. Outer covering of kidney is called as

- A. Renal capsule
- B. Adipose capsule
- C. Renal facia
- D. Reticular facia



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28. Cortex extened in to medulla as

- A. Columns of Bertini
- B. Columns of Bellini
- C. Renal pyramids
- D. Calyces

Answer:

29. Number of pyramids present in kidney are

A. 6 to 8

B. 7 to 12

C. 6 to 10

D. 7 to 18

Answer:



30. The large space present in front of medulla is called

- A. Renal sinus
- **B.** Pelvis
- C. Urinary space
- D. a and b

Answer:



31. Triangular	area	present	in	urinary	bladder
is called					

- A. Neck
- B. Mouth
- C. Trigone
- D. Canal



- **32.** When bladder gets distended by urine the nervous reflex causes
 - A. Bladder muscles to contract and internal shpincter to relax
 - B. Bladder muscles to relax and internal sphincter to contract
 - C. Bladder muscles and internal sphincter to contract
 - D. Bladder muscles and internal spincter to



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33. Receptors present in the opening of urethra are called

- A. Viscero receptors
- B. Strech receptors
- C. Baroreceptors
- D. Gustato receptors



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34. Urinary bladder in female is present

A. below uterus

B. In between uterus and anus

C. In front of rectum

D. In front of pubic symphysis

Answer:

35. Which is correct with reference to opening of ureter in urinary bladder

A. Oblique and dorsal

B. Straight and dorsal

C. Straight and ventral

D. Oblique and ventral

Answer:



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36. Kidney performs the function of excretion to maintain homeostasis of body fluids through regulating their

A. Volume, composition, PH and osmotic potential

B. Volume only

C. Composition and PH only

D. Osmotic potential only



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37. Structural and functional unit of kidney is called as

- A. Nephron
- B. Uriniferous tubule
- C. Neuron
- D. a and b



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38. Renal vein which collects the blood from kidney is a tributary of

- A. Pulmonary arch
- B. Systemic arch
- C. Superior venacava
- D. Inferior venacava



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39. Inner membrane of Bowman's capsule is lined by

- A. Squamous cells
- B. Podocytes
- C. Pituicytes
- D. Pinocytes



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40. Glomerulus is

A. Capillary knot of afferent arteriole

B. Capillary kont of efferent arteriole

C. a and b

D. capillary network of Renal vein

Answer:

- 41. Malphighian body is present in
 - A. Renal cortex
 - B. Renal medulla
 - C. In between cortex and medulla
 - D. Pelvis



42. PCT is internally lined by

- A. Squamous calls
- B. Cuboidal cells
- C. Cuboidal cells with brush margin
- D. Flat cells with brush margin

Answer:



43. Descending limb of loop of Henle is

- A. Thin walled
- B. Permeable to water
- C. Lined by flat cells
- D. All of these

Answer:



44. Main role of Henle's loop

- A. To separate nitrogenous wastes
- B. To concentrate urine
- C. To conserve water
- D. b and c

Answer:



45. Cortical nephrons are with

- A. Long loop of Henle
- B. Present in medulla region
- C. Short loop of Henle
- D. Present in cortex and having short loop

of Henle

Answer:



- **46.** Which membrane of nephron is called as dialyzing membrane.
 - A. Visceral membrance of Bowman's capsule
 - B. Parietal membrane of Bowman's capsule
 - C. Endothelial membrance of glomerulus
 - D. Membrance of loop of Henle



47. The pores of glomerular capillaries are called

A. Fenestrae

B. Endothelial pores

C. Glomerular slit

D. All of these

Answer:



48. Which part of nephron is called pars convoluta

A. PCT

B. DCT

C. CT

D. Loop of Henle

Answer:



49. What is true about DCT

- A. Na^+ reabsorption requires energy
- B. K^+ reabsorption does not requires energy
- C. Ammonia is excreted
- D. Water reabsorption requires energy

Answer:



50. What part of nephron is called as dilutaling segment

- A. PCT
- B. DCT
- C. Ascending limb of loop of Henle
- D. Descending limb of loop of Henle

Answer:



51. Loop of Henle is most highly developed in

- A. Fresh water fishes
- B. Salamander
- C. Desert lizard
- D. Mammals

Answer:



- **52.** In a glomerulus.
 - A. Afferent arteriole is thicker than efferent arteriole
 - B. Afferent capillaries are thicker than efferent capillaries
 - C. Afferent arteriole is thinner than efferent arteriole
 - D. Afferent capillaries are thinner than efferent capillaries



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53. Ultra filtration occurs in

A. Malpighian body

B. PCT

C. Loop of Henle

D. DCT

Answer:

54. Ultra filtration occurs through physical principle called

A. Pressure gradient

B. Chemical gradient

C. Electrical gradient

D. All of these

Answer:



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55. GFR is about

A. 125 ml/min

B. 600 ml/min

C. 1200 ml/min

D. 180 ml/min

Answer:



56. The amount, of blood passes through both the kidneys per minute is about

- A. 600 ml
- B. 1200 ml
- C. 180 ml
- D. 200 ml

Answer:



57. The formed filtrate during ultra filtration is called

A. Glomerular filtrate

B. Primary urine

C. Deproteinized plasma

D. All of these

Answer:



58. The composition of glomerular filtrate is

A. Hypertonic to body fluid except RBC

B. Hypertonic to body fluid except plasma proteins

C. Isotonic to body fluid excep plasma proteins

D. Any one of them

Answer:



59. J.G. apparatus secrete

- A. Aldosterone
- B. Angiotensin
- C. Renin
- D. All of these

Answer:



60. The Hydrostatic pressure created in the glomerulus is called

A. BCOP

B. GHP

C. CHP

D. NFP

Answer:



61. NFP is about

- A. 15 mm Hg
- B. 10 mm Hg
- C. 30 mm Hg
- D. 55 mm Hg

Answer:



62. In ornithine cycle, enzyme arginase breakdown arginine in to

- A. Citrulline and ammonia
- B. Ornithine and ammonia
- C. Ornithine and urea
- D. Citrulline and urea

Answer:



63.	Glomerular	filtrate	will	not	contain
normally					

- A. Glucose
- B. Nacl
- C. Creatinine
- D. Albumin



64. Filtration fraction is the ratio of

A. GFR and RPF

B. Transport maximum (Tm) and clearance

factor (cf)

C. Hb and HbO_2

D. O_2 and CO_2

Answer:



65. Ornithine cycle removes two-waste products from blood in liver

- A. Urea and CO_2
- B. CO_2 and ammonia
- C. Ammonia and urea
- D. Ammonia and uric acid

Answer:



- 66. Ultrafiltration occurs in glomerulus when
 - A. Hydrostatic pressure exceeds osmotic pressure
 - B. Osmotic pressure exceeds hydrostatic pressure
 - C. Capsular hydrostatic pressure exceeds glomerula hydrostatic pressure
 - D. Colloidal osmotic pressure plus capsular pressure remain less than glomerular

hydrostatic pressure

Answer:



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67. Glomerular filtration rate would be decreased by

- A. Constriction of efferent arteriole
- B. An increase in afferent arteriole pressure
- C. Compression of the renal capsule

D. An increase in renal blood flow

Answer:



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68. In human beings, the capsular urine entering the PCT is

- A. Isotonic to blood
- B. Hypotonic to blood
- C. Hypertonic to blood

D. Isotonic to sea water

Answer:



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69. Selective reabsorption occurs by

A. Passive transpot

B. Active transport

C. Osmosis

D. All of these



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70. Which of the following is reabsorb 100 %

A. Water

B. Glucose

C. lons

D. Urea

Answer:

71. Reabsorption in PCT is

- A. Facultative
- **B.** Obligatory
- C. Both a and b
- D. None of these

Answer:



72. Water is reabsorbed every where in renal tubule except

- A. PCT
- B. DCT
- C. Ascending limb of loop of Henle
- D. Desceding limb of loop of Henle

Answer:



73. Facultative absorption occurs in

- A. PCT
- B. DCT
- C. Loop of Henle
- D. Collecting duct

Answer:



74. Main role of ADH is

- A. Vasoconstriction of blood vessels
- B. To increase blood pressure
- C. To increase water permeability of DCT
- D. To decrease water permeability of DCT

Answer:



75. Low secretion of ADH causes

- A. Diuresis
- B. Polyurea
- C. Diabetes mellitus
- D. Diabetes insipidus

Answer:



76. When a person is suffering from, poor renal absorption, which one of the following will not help in maintenance of blood volume

- A. Decrease in glomerular filtration
- B. Increased ADH secretion
- C. Decreased arterial pressure in kidneys
- D. Increased arterial pressure in kidneys

Answer:



77. Protein rich diet not cause much change in constituent of which substance in urine

- A. Urea and CO_2
- B. Creatinine
- C. Uric acid
- D. Ammonium salts

Answer:



78. Reabsorption of chloride ions from glomerular filtrate in kidney tubule occur by

- A. Active transport
- **B.** Osmosis
- C. Diffusion
- D. Brownian movement

Answer:



79. To maintain osmolarity, Na and Cl are pumped out of renal tubule in the region of

- A. PCT and DCT
- B. Ascending limb of Henle
- C. DCT and collecting duct
- D. Descending limb of Henle

Answer:



80. Renin angiotensin pathway control						
A. Ultrafilitration						
B. Blood Pressure						
C. Cardiac out put						
D. glucose reabsorption						
Answer:						
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- A. Descending limb of loop of Henle
- B. Ascending limb of loop of Henle
- C. DCT
- D. PCT



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82. By tubular secretion which of the substances are secreted

- A. Creatinine
- B. $K^{\,+}$
- C. H^+
- D. All the these



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83. In the event of tubular secretion, the transported substance moves from

- A. Tubular cells to tubular fluid via particular capillaries
- B. Peritubular capillaries, across tubular cells to tubular fluid
- C. Peritubular capillaries to tubular cells
- D. Tubular cells into tubular fluid



84. Which of the following process is always active

- A. Ultra filtration
- B. Selective reabsorption
- C. Tubular secretion
- D. a and b

Answer:



85.	Mechanism	of	uric	acid	excretion	in	ĉ
nep	hron is						

- A. Osmosis
- B. Ultrafiltration
- C. Diffusion
- D. Secretion



86. Human urine is pale yellow colour due to presence of

- A. Bile pigments
- B. Urochrome pigments
- C. Urinoid
- D. Urea

Answer:



87. The urine on standing gives a pungent smell It is due to

A. Conversion of urea into ammonia by **bacteria**

B. Conversion of uric acid into ammonia by

ornithine cycle

C. Conversion of amino acids into ammonia

D. All of the above

Answer:



88. In all animals the osmoregulatory tissue is

- A. Epithelium
- **B.** Connective
- C. Nervous
- D. Lymphatic

Answer:



89. Problem of osmoregulation is more among

- A. Terrestrial animals
- B. Desert animals
- C. Aquatic animals
- D. Aerial animals

Answer:



90. The animals which do not actively control the osmotic condition of their body fluids are called

- A. Osmoconformer
- B. Osmoregulator
- C. Catadromous
- D. Anadromous

Answer:



91. Skin excrete urea and Glucose through

- A. Sebaceous glands
- B. Sweat glands
- C. Rectal glands
- D. a and b

Answer:



92. Lungs help in excretion of

- A. Novolatile wastes
- B. Volatile wastes
- C. a and b
- D. Metabolic waste

Answer:



93. In which organ of the body the insoluble calcium phosphate is eliminated

- A. Liver
- B. Kidneys
- C. Lungs
- D. Large intestine

Answer:



94. Biliverdin and bilirubin are excreted mainly through

A. Urine

B. Faeces

C. Sweat

D. Vitamins

Answer:



95. Kidney stone is produced due to

- A. Deposition of sand particles
- B. Precipitation of oxylates
- C. Crystalisation of oxylates
- D. Blockage of fats

Answer:



96. A condition of failure of kidney to form urine is

- A. Anuria
- B. Oliguria
- C. Ketonuria
- D. Dysuria

Answer:



97. Diuresis is a condition charact	erised by
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- A. Decrease in urine volume
- B. Increase in urine volume
- C. Increase in glucose excretion
- D. Decrease in elecrolyte balance



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98. Which of the following is disease of kidney.

- A. Bright's disease
- B. Addison's diseas
- C. Parkinson's disease
- D. Grave's disease



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99. Uremia is an excretory disorder in which

- A. The tubules of kidney reabsorb urea in large amount
- B. Urea is produced in excess in body
- C. Concentation of urea goes high in the blood because the tubules are not able to remove it from blood
- D. None of the above



- **100.** Which of the following would help in prevention of diuresis?
 - A. Atrial natriuretic factor causes
 vasconstriction
 - B. Decrease in secretion of renin of JG cells
 - C. More water reabsorption due to undersecretion of ADH
 - D. Reabsorption of Na^+ and water from renal tubules due to aldosterone



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101. Presence of which of the following conditions in urine are indicative of diabetes Mellitus?

- A. Ketonuria and Glycosuria
- B. Renal calculi and Hyperglycaemia
- C. Uremia and Ketonuria
- D. Uremia and Renal Calculi

