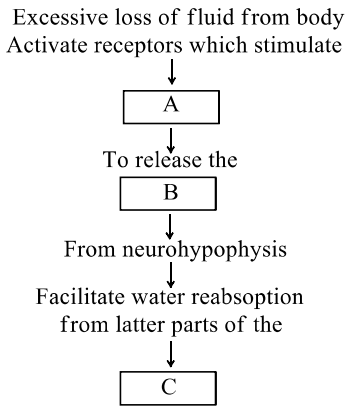
GPLUS EDUCATION

Date :
Time : **BIOLOGY**
Marks :

EXCRETORY PRODUCTS AND THEIR ELIMINATION

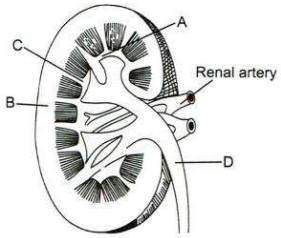
Single Correct Answer Type

1. 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) Anti-heparin is added prior to haemodialysis
2. Polyuria is a condition in which
   a) Amount of urine pass out is more
   b) Amount of urine pass out is less
   c) No urine pass out
   d) No urine formation
3. Glucose, Na, and amino acid are actively transported substances, because
   a) Their movement occurs according to concentration gradient
   b) Their movement occurs against concentration gradient
   c) ATP is not needed for transportation
   d) They are transported by simple diffusion
4. Which of the following is both osmoregulator as well as nitrogenous product?
   a) NH_3 b) Urea c) Uric acid d) All of these
5. With respect to mode of excretion bony fishes are?
   a) Osmoconformers b) Ammonotelic c) Uricotelic d) Uriotelic
6. Identify the true statements and choose the correct option accordingly
   I. Blood vessel leading to the glomerulus is called efferent arteriole
   II. Vasa-recta, peritubular capillaries and glomerulus, all have blood
   III. Cortical nephrons have highly reduced vasa-recta
   IV. Vasa-recta runs parallel to the Henle's loop in the juaxta-medullary nephron
   a) I, II and III b) I, II and IV c) I, III and IV d) II, III and IV
7. The yellow colour of urine is due to the presence of
   a) Urea b) Uric acid c) Urochrome d) Bilirubin
8. Choose the correct option for A, B, C from given option



   a) A-Adrenal cortex, B-ADH, C-PCT
   b) A-Adrenal medulla, B-ADH, C-PCT
   c) A-Hypothalamus, B-ADH, C-Distal tubules
   d) A-Lungs, B-ADH, C-Distal tubules
9. Structural and functional unit of the kidney is
   a) Medulla b) Nephridia c) Nephron d) Hilum

10. Marine teleost fishes excrete
    a) Uric acid b) Ammonia c) Urea d) None of these
11. Identify A to D in the given structure and choose the correct option accordingly



    a) A-Calyx, B-Cortex, C-Renal column, D-Ureter
    b) A-Calyx, B-Cortex, C-Renal column, D-Urethra
    c) A-Urethra, B-Cortex, C-Renal column, D-Calyx
    d) A-Urethra, B-Calyx, C-Renal column, D-Cortex
12. The net filtration pressure in the glomerulus of the kidney is
    a) 70 mm Hg b) 35 mm Hg c) 25 mm Hg d) 10 mm Hg
13. Loop of Henle is meant for the absorption of
    a) Potassium b) Glucose c) Water d) Carbon dioxide
14. Functioning of kidney is efficiently regulated by
    a) ANF b) JGA c) Both (a) and (b) d) Lungs
15. Select the correct pathway for the passage of urine in humans
    a) Renal vein → Renal ureter → Bladder → Urethra
    b) Collecting tubule → Ureter → bladder → Urethra
    c) Pelvis → Medulla → Bladder → Urethra
    d) Cortex → Medulla → Bladder → Ureter
16. The waste products produced in man which need excretion are?
    a) Carbon dioxide b) Urea and salts c) Excess of water d) All of these
17. Excretion of nitrogenous waste product in semisolid from occurs in
    a) Ureotelic animals b) Ammonotelic animals
    c) Uricotelic animals d) Amniotes
18. Juxta glomerular apparatus is modification in the
    a) Afferent atriole and PCT b) Afferent atriole and DCT
    c) Efferent atriole and DCT d) Efferent atriole and PCT
19. A large quantity of fluid is filtered every day by the nephrons in the kidneys. Only about 1% of it is excreted as urine. The remaining 99% of the filtrate
    a) Gets collected in the renal pelvis b) Is lost as sweat
    c) Is stored in the urinary bladder d) Is reabsorbed into the blood
20. Autoregulation of GFR (Glomerulus Filtration Rate) is takes place by
    a) Renin angiotensis mechanism b) Juxtaglomerulus apparatus
    c) Vasopressin d) All of the above
21. Physiologically urea is produced by the action of an enzyme
    a) Arginase b) Urease c) Uricase d) None of these
22. Malpighian body or renal corpuscle is/are
    a) Bowman's capsule b) Glomerulus
    c) Both (a) and (b) d) Proximal convoluted tubule
23. Among ammonia, uric acid and urea, which one is the most soluble?
    a) Ammonia b) Uric acid c) Both (a) and (b) d) Urea
24. The living steady state has a self-regulatory mechanism which is known as
    a) Feed back mechanism b) Homeotherms
    c) Homozygous d) Homeostasis
25. Uricotelism is found in

a) Mammals and birds
b) Fishes and freshwater protozoans
c) Birds, reptiles and insects
d) Frogs and toads

26. Volume of urine is regulated by
a) Aldosterone
b) Aldosterone and testosterone
c) ADH
d) Aldosterone and ADH

27. Urine is yellow in colour, due to
a) Prochrome
b) Haemoglobin
c) Urochrome
d) Creative

28. Vasa recta is minute vessel of Peritubular capillaries network, which is
a) Also known as juxta-glomerular apparatus
b) Running parallel to loop of Henle
c) Running parallel to PCT
d) Running parallel to DCT

29. A person is undergoing prolonged fasting. His urine will be found to contain abnormal quantities of
a) Fats
b) Ketones
c) Amino acids
d) Glucose

30. If excess water passes out from tissues without being restored by kidneys, the cells would
a) Burst open and die
b) Not be affected at all
c) Extract water from plasma
d) Shrivel and die

31. Part of the kidney through which the ureter, blood vessels and nerves enters into it is
a) Renal cortex
b) Renal medulla
c) Hilum
d) Urethra

32. Which one of the following correctly explains the function of a specific part of a human nephron?
a) Henle's loop – Most reabsorption of the major substances from the glomerular filtrate
b) Distal convoluted tubule—Reasorption of ions into the surrounding blood capillaries
c) Afferent arteriole—Carries the blood away from the glomerulus towards renal vein
d) Podocytes—Creat minute spaces (slit pores) for the filteration of blood into the Bowman's capsule

33. When does glomerular filtration occurs in Bowman's capsule?
a) When hydrostatic pressure of blood in the glomerulus is 70 mm Hg and net filtrate pressure is -25 mm Hg
b) When hydrostatic pressure of blood in the glomerulus is 70 mm Hg and net filtrate pressure is -35 mm Hg
c) When hydrostatic pressure of blood in the glomerulus is 70 mm Hg and net filtrate pressure is 10 mm Hg
d) When hydrostatic pressure of blood in the glomerulus is 70 mm Hg and net filtrate pressure is -70 mm Hg

34. Smell of urine is due to the
a) Urochrome
b) Urinode
c) Urea
d) Melanin

35. The counter current mechanism operates in nephron
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) Between the loop of Henle and vasa recta

36. The average quality of urea excreted in urine by man per day is
a) 1-5 g
b) 25-30 g
c) 1-1.5 L
d) 80 g

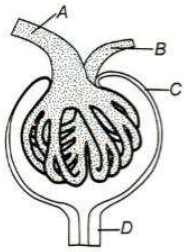
37. Melanuria is caused by the abnormal catabolism of
a) Alanine
b) Tyrosine
c) Proline
d) Tryptophan

38. Which one of the following statements is correct with respect to kidney function regulation?
a) Exposure to cold temperature stimulates ADH release
b) An increase in glomerular blood flow stimulates formation of angiotensin II
c) During summer when body loses lot of water by evaporation, the release of ADH is suppressed
d) When someone drinks lot of water ADH release is stopped

39. Blood leaving liver and going towards heart is rich in
a) Bile
b) Urea
c) Ammonia
d) Oxygen

40. Urea synthesis occurs in
a) Kidney
b) Liver
c) Brain
d) Muscles

41. Green glands present in some arthropods help in
    a) Respiration b) Excretion c) Digestion d) Reproduction
42. I. Na^+ II. H_2O
    III. HCO_3^- IV. H^+
    V. K^+ VI. NH_3
    Which of the given ions are reabsorbed and secreted DCT?
    Reabsorb Secreted
    a) I, II and III IV, V and VI b) IV, V and VI I, II and III
    c) I, II and V III, IV and V d) III, IV, and VI I, II and V
43. Reabsorption of the filtrate in the renal tubules takes place by
    a) Active means b) Passively means c) Either (a) or (b) d) Osmosis means
44. Aldosterone causes reabsorption of …A… from distal part of tubule. This leads to increase in …B…
    Here A and B refers to
    a) A-Na^+; B – GFR b) A-water; B-GFR c) Both (a) and (b) d) A-Cl^-; B-GFR
45. In human, excretory system consists of
    I. pair of kidneys II. one pair of ureters
    III. urinary bladder III. Urethra
    V. skin VI. Lungs
    VII. liver
    a) I, II, III and II b) I, II, III and IV
    c) I, II, III and IV d) I, II, III, IV, V, IV and VII
46. The net pressure gradient that cause the fluid to filter out of the glomeruli in the capsule is
    a) 20 mm Hg b) 75 mm Hg c) 30 mm Hg d) 50 mm Hg
47. In the glomerulus of the nephron, the afferent arteriole is
    a) Narrower than efferent arteriole b) Wider than efferent arteriole
    c) Of some diameter as efferent arteriole d) Of same diameter as vasa-recta
48. NaCl is returned to interstitium by
    a) Ascending limb of Henle's loop b) Descending limb of Henle's loop
    c) Ascending limb of vasa recta d) Descending limb of vasa recta
49. Identify A to D in the following structure and choose the correct option for A, B, C and D



    a) A-Afferent arteriole, B-Efferent arteriole, C-Bowman's capsule, D-Proximal convoluted tubule
    b) A-Efferent arteriole, B-Afferent arteriole, C-Bowman's DTC
    c) A-Efferent arteriole, B-Efferent arteriole, C-Bowman's capsule, D-DCT
    d) A-Efferent arteriole, B-Afferent arteriole, C-Bowman's capsule, D-DCT
50. Choose the correct statements
    a) Sebaceous gland eliminate sterols, hydrocarbons, waxes
    b) Secretion of sebaceous gland provide oily protective covering of skin
    c) Small amount of nitrogenous wastes eliminated through saliva
    d) All of the above
51. Choose the correct option with respect to the maximum urea level
    a) Renal vein b) Hepatic vein c) Pulmonary artery d) Pulmonary vein
52. Renin is secreted from
    a) Juxtaglomerular cells b) Podocytes c) Nephridia d) Stomach

53. Main function of DCT of nephron is to maintain the
    a) pH in blood
    b) Na-K balance of blood
    c) Both (a) and (b)
    d) Temperature of blood
54. Uric acid is the chief nitrogenous excretory component of
    a) Man
    b) Earthworm
    c) Cockroach
    d) Frog
55. A fall in the GFR rate activates the
    a) JG cells to release renin
    b) JG cells to release aldosterone
    c) JG cells to release epinephrine
    d) JG cells to release nor-epinephrine
56. Name the condition when the concentration of ketone body increases in urine
    a) Acromegaly
    b) Ketonuria
    c) Diabetes insipidus
    d) Cushing's disease
57. The excretory organ in crustaceans, like prawns is
    a) Antennal glands
    b) Nephridia
    c) Flame cells
    d) Malpighian tubules
58. Which one of the following statements in regard to the excretion by the human kidneys is correct?
    a) Descending limb of loop of Henle is impermeable to water
    b) Distal convoluted tubule is incapable of reabsorption HCO_3
    c) Nearly 99 per cent of the glomerular filtrate is reabsorbed by the renal tubules
    d) Ascending limb of loop of Henle is impermeable to electrolytes
59. Glucose and amino acids are reabsorbed in the
    a) Proximal tubule
    b) Distal tubule
    c) Collecting duct
    d) Loop of Henle
60. What is the obligatory water reabsorption?
    a) Reabsorption of water from PCT
    b) Reabsorption of water from loop of Henle
    c) Both (a) and (b)
    d) Water secretion by Bowman's capsule
61. Ammonia or urea are the waste products, which are derived from
    a) Proteins
    b) Carbohydrate
    c) Lipids
    d) Fats
62. Transport of electrolytes through loop of Henle takes place by
    a) Actively
    b) Passively
    c) Both (a) and (b)
    d) Diffusion
63. Choose the correct statement.
    a) The juxta medullarly nephrons have reduced Henle's loop
    b) Vasa recta is well developed in cortical nephrons
    c) The PCT and DCT are situated in the medulla of the kidney
    d) The ascending limb of the Henle's loop extends as the DCT
64. Which one is mismatched?
    a) Bowman's capsule—Glomercular filtration
    b) PCT—Absorption of Na^+ and K^+
    c) DCT—Absorption of glucose
    d) None of the above
65. In which of the following regions of a nephron, does maximum reabsorption of useful substances takes place?
    a) Henle's loop
    b) Glomerulus
    c) Proximal convoluted tubule
    d) Distal convoluted tubule
66. Urea cycle is also called
    a) Kreb's cycle
    b) Henselet cycle
    c) Kreb-Henselet cycle
    d) Dark reaction
67. Percentage of electrolytes and water reabsorbed by PCT is
    a) 60-70
    b) 70-80
    c) 80-90
    d) 90-95
68. ADH is also called
    a) Vasopressin
    b) Prolactin
    c) Urease
    d) Oxytocin
69. Gout is a condition in which
    a) High level of urine in blood is found
    b) High level of urea in blood is found
    c) High level of uric acid in blood is found
    d) All of the above
70. During urine formation, which of the following processes create high osmotic pressure in the uriniferous tubule?
    a) Active Na^+ absorption, followed by absorption of Cl^-

b) Active Cl^- absorption, followed by absorption of Na^+
c) Active secretion of Na^+ into efferent arteriole followed by absorption of Cl^- into efferent renal arteriole
d) Active secretion of Cl^- and absorption of Na^+ into efferent renal arteriole

71. 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

72. Which substance is in higher concentration in blood than in glomerular filtrate?
a) Water b) Glucose c) Urea d) Plasma proteins

73. Average pH of human urine is
a) 6.0 b) 9.0 c) 3.0 d) 7.0

74. A portion of uric acid is converted to urea and ammonia by intestinal
a) Urogenolysis b) Ureolysis c) Uricolysis d) Ureotolysis

75. Mammals have the ability to produce
a) Isotonic urine b) Hypertonic urine c) Hypotonic urine d) Acidic urine

76. The process of excretion is the
a) Removal of useful substances from the body
b) Removal of metabolic waste from the body
c) Removal of the substances which have never been a part of the body
d) Formation of useful substances in the body

77. Which one of the following amino acids is not found in proteins?
a) Arginine b) Ornithine c) Aspartic acid d) Tyrosine

78. Inner to the hilum of the kidney, there is a broad funnel-shaped space called
a) Renal pelvis b) Medulla c) Cortex d) Adrenal gland

79. 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

80. What will happen if the stretch receptors of the urinary bladder wall are totally removed?
a) Urine will not collect in the bladder
b) Micturition will continue
c) Urine will continue to collect normally in the bladder
d) There will be no micturition

81. Glomerulus is a tuft of capillaries formed by …A… (A fine branch of renal artery). Blood from the glomerulus is carried away by an …B…
Select the correct option for A and B to complete the given NCERT statement
a) A-efferent atriole; B-afferent atriole
b) A-efferent atriole; B-efferent atriole
c) A-afferent atriole; B-afferent atriole
d) A-afferent atriole, B-efferent atriole

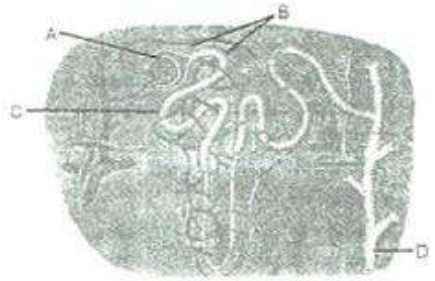
82. RAAS
a) Is triggered when juxta-glomerular cells of JGA releases renin in response to various stimuli
b) Is responsible for regulation of kidney function
c) Is a powerful mechanism responsible for regulation of functioning of heart
d) Both (a) and (b)

83. Nephritis is caused by
a) Fungi b) Bacteria c) Virus d) Protozoa

84. Ammonia is converted into urea in
a) Kidney b) Lungs c) Liver d) Spleen

85. Solenocytes are used for
a) Elimination of nitrogenous excretory wastes
b) Respiration
c) Digestion
d) All of the above

86. Nitrogenous waste products are eliminated mainly as
    a) Urea in tadpole and uric acid in adult frog
    b) Urea in adult frog and ammonia in tadpole
    c) Urea in tadpole as well as in adult frog
    d) Urea in tadpole and ammonia in adult frog
87. Acceossory excretory organs are
    I. skin II. lungs
    III. liver IV. sebaceous gland
    Choose the correct option
    a) I and II b) II and III c) III and IV d) I, II, III and IV
88. Erythropoietin is secreted from
    a) Pituitary gland b) Pancreas c) Adrenal gland d) Kidney
89. A fall in GFR activate …A… to release …B…, which converts angiotensinogen in blood to …C… and further to …D…
    Choose the correct option for A, B, C, D from given options
    a) A-JG cells, B-renin, C-angiotensin-I, D-angiotensin-II
    b) A-renin, B-JG cells, C-angiotensin-I, D-angiotensin-II
    c) A-renin, B-JG cells, C-angiotensin-II, D-angiotensin-I
    d) A-JG cells, B-angiotensin, A-renin-I, D-angiotensin-II
90. The human kidney
    a) Is responsible for the storage of nutrients such as glycogen
    b) Concentrates the urine by actively transporting water out of the filtrate
    c) Produces more dilute urine when the collection ducts become less permeable to water
    d) Responds to antidiuretic hormone by increasing urine output
91. The excretory material of bony fish is
    a) Urea b) Protein c) Ammonia d) Amino acid
92. The urine is
    a) Hypotonic to blood and isotonic in medullarly fluid
    b) Hypertonic to blood and isotonic to medullarly fluid
    c) Isotonic to blood and hypotonic to medullarly fluid
    d) Isotonic to blood and hypertonic to medullarly fluid
93. I. ADH
    II. Renin-angiotensin
    III. ANF
    IV. Counter – current mechanism which
    Choose the option containing factors, which regulates the osmoregulation of body fluids?
    a) I, II and III b) II, III and IV c) I, II and IV d) All of the above
94. Counter current mechanism helps to maintain a concentration gradient. This gradient help in
    a) Easy passage of water from medulla to collecting tubule and thereby concentrating urine
    b) Easy passage of water from collecting tubule to interstitial fluid and thereby concentrating urine
    c) Easy passage of water from medullary interstitial fluid to collecting tubule and thereby diluting urine
    d) Inhibition of passage of water between the collecting tubule and medulla and so isotonic urine is formed
95. Choose the correct statement
    I. Renal artery transport blood to kidney
    II. Loop of Henle concentrate urine
    III. Podocytes occur in inner wall of Bowman's capsule
    IV. Ultrafiltrate is blood plasma minus protein
    a) I, II and III b) I, II and IV c) I, II and IV d) None of these
96. While urine formation progress, which of the following process takes place in the region labelled as A, B, C and D in the given diagram?



a) A-Collection of urine, B-Secretion C-Reabsorption, D-Pressure filtration
b) A-Pressure filtration, B-Reabsorption C-Secretion, D-Collection of urine
c) A-Pressure filtration, B-Secretion C-Reabsorption, D-Collection of urine
d) A-Reabsorption, B-Secretion C-Pressure filtration, D-Collection of urine

97. Which one is the component of ornithine cycle?
a) Ornithine, citrulline and fumaric acid
b) Ornithine, citrulline and arginine
c) Ornithine, citrulline and alanine
d) Amino acids are not used

98. Collecting duct of nephron extends kidney from cortex to
a) Capsule region
b) Inner part of medulla
c) Outer part of medulla
d) Middle part of medulla

99. Kidney stones are produced due to deposition of uric acid and
a) Silicates
b) Minerals
c) Calcium carbonate
d) Calcium oxalate

100. Anuria is failure of
a) Kidney to form urine
b) Tubular secretion in kidney
c) Tubular filtration in kidney
d) Tubular reabsorption in kidney

101. Choose the correct order of urine formation in human
a) PCT → ALH → DLH → DCT → CD
b) ACH → DLH → PCT → DCT → CD
c) PCT → DLH → ALH → DCT → CD
d) CD → DCT → ACH → DLH → PCT

102. Consider the following statements
I. Flame cells are excretory structures in flatworms.
II. Green glands are excretory organs in annelids.
III.Columns of Bertini are the conical projections of renal pelvis into renal medulla between the renal pyramids.
a) I and II correct
b) II and III incorrect
c) I and III correct
d) I, II and III correct

103. Arrange the following parts of the nephron in a sequential manner and select the correct option accordingly
I. Glomerulus
II. Bowman's capsule
III. Henle's loop
IV. Proximal convoluted tubule
V. Collecting duct
VI. Distal convoluted tubule
a) I→II→III→IV→V→VI
b) I→II→IV→III→VI→V
c) I→II→IV→III→V→VI
d) VI→III→II→I→VI→V

104. The outline of principal event of urination is given below in unorder 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 messenger to initiate the contraction smooth muscles of bladder and simultaneous relaxation of urethral sphincter
The correct order of steps for urination is
a) II→I→IV→III
b) IV→III→II→I
c) II→I→III→IV
d) III→II→I→IV

105. Malpighian tubules are the excretory structures of

a) Insects b) Mammals c) Birds d) Reptiles

106. The first step in the urine formation is the filtration of the blood, which is carried by the ...A... and is called ...B... . On an average ...C... . mL of blood is filtered by kidneys per minute, which constitutes ...D... of the blood pumped out by each ventricle of the heart in a minute.
Choose the correct options for the blanks A to D to complete the given NCERT statement
a) A-glomerulus; B-filtration, C-800-900, D – $\frac{1}{4}$th
b) A-glomerulus; B-filtration, C-1100-1200, D – $\frac{1}{5}$th
c) A-glomerulus; B-filtration, C-1100-1300, D – $\frac{1}{6}$th
d) A-glomerulus; B-filtration, C-1100-1500, D – $\frac{1}{5}$th

107. Choose the correct ones
I. Vasa recta is lacking in cortical nephrons
II. Maximum number of nephrons in kidney are juxta-medullary type
III. DCT of many nephorns open into collecting tubule
IV. During summer when body loses lot of water by evaporation, the release of ADH is suppressed
V. When someone drinks lot of water, ADH release is suppressed
VI. Exposure to cold temperature stimulates ADH release
VII. An increase in glomerular blood flow stimulates formation of angiotensin II
The correct option is
a) All except I and IV b) All except V and VII c) All except I and V d) All except II and VI

108. All Bowman's capsules of the kidney are found in
a) Pelvis b) Medulla c) Cortex d) None of these

109. Human kidneys can produce urine nearly
a) Three times concentrated than initial filtrate
b) Four times concentrated than initial filtrate
c) Five times concentrated than initial filtrate
d) Six times concentrated than initial filtrate

110. ANF (Anti Natriuretic Factor) is released by
a) Lung b) Kidney c) Heart d) All of the above

111. Mammals excrete
a) Urea b) Uric acid c) Ammonia d) All of these

112. Medullary gradient is mainly developed due to
a) NaCl and urea b) NaCl and glucose
c) Glucose and urea d) Ammonia and glucose

113. An adult human excretes on an average
a) 2-3 litres of urine per day b) 1-1.5 litres of urine per day
c) 2-5 litres of urine per day d) 4-5 litres of urine per day

114. Angiotensin-II activates the ....A.... and release .....B.....
Choose the correct option for A and B to complete the given statement
a) A-adrenal cortex; B-aldosterone b) A-adrenal medulla; B-aldosterone
c) A-adrenal capsule; B-aldosterone d) A-adrenal medulla; B-oxytocin

115. I. Ureter II. Renal pelvis, III. Calyx IV. Urinary bladder V. Urethra
Choose the correct sequence of urine route to outside
a) I→II→III→IV→V b) V→IV→III→II→I c) V→III→IV→I→II d) III→II→I→IV→V

116. Loop of Henle is associated with
a) Excretory system b) Respiratory system c) Reproductive system d) Digestive system

117. For brain cells the ammonia is very toxic because
a) Ammonia (NH_4^+ ions) affect the brain cell functioning by changing polarity of cell membrane
b) Ammonia is not very toxic to the other cell than brain cells
c) Ammonia is highly stable in brain cells

d) Ammonia penetrate the cell membrane of brain cells

118. NaCl is transported by ascending limb of Henle's loop, which is exchanged with
a) DCT b) PCT
c) Ascending limb of vasa recta d) Descending limb of vasa recta

119. Which one is related to urine concentration in mammals?
a) Testosterone hormone b) Antidiuretic hormone
c) Oxytocin hormone d) All of these

120. Characteristic common in frog and human
I. Internal fertilisation
II. Nucleated RBC
III. Four chamber heart
IV. Ureotalic excretion
V. Lungs are organ of respiration
The correct option is
a) I and III b) II and IV c) II and IV d) Only IV

121. A child has single kidney since birth. This variation is
a) Hybridization b) Negative meristic c) Blastogenic d) Substantive

122. Haemodialysis helps in patient having
a) Anaemia b) Uremia c) Goitre d) Diabetes

123. JGA (Juxta Glomerular Apparatus), a sensitive region, which regulates the glomerular filtration rate is present near the
a) DCT and PCT b) DCT and efferent arteriole
c) DCT and afferent arteriole d) Loop of Henle's and DTC

124. Choose the correct statements
I. Kidney transplantation is the ultimate method at the stage where drug or dialysis do not help
II. Close relatives are often used as kidney donors to minimise risk of rejection
III. Cylosporin-A is used as immunosuppressive agent in kidney transplant patient
IV. Heparin and antiheparin are used in haemodialysis
Choose the correct option
a) I, II and III b) IV, III and II c) I, III and IV d) I, II, III and IV

125. What is glycosuria?
a) Low amount of sugar in urine b) Low amount of fat in urine
c) Average amount of carbohydrate in urine d) High amount of sugar in urine

126. An organism which don't have loop of Henle will excrete
a) No urine b) Dilute urine c) Concentrated urine d) No change in urine

127. Which among the following is the only osmoconformer vertebrate?
a) Rabbit b) Hagfish c) Bird d) None of these

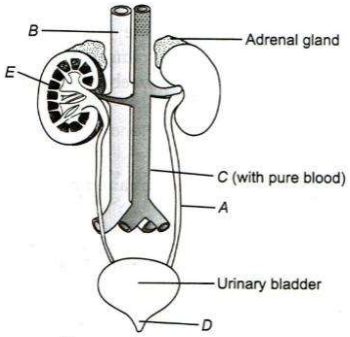
128. Duct of Bellini opens on
a) Ureter b) Renal papilla c) Duodenum d) DCT

129. Ornithine cycle refers to the sequence of biochemical reactions taking place in the
a) Oral cavity b) Liver c) Pancreas d) Stomach

130. In the nephron of rabbit, reabsorption of glucose occurs in
a) Descending limb of Henle's loop b) Proximal convoluted tubule
c) Distal convoluted tubule d) Ascending limb of Henle's loop

131. Facultative water reabsorption is
a) Reabsorption of water in PCT through ADH
b) Reabsorption of water in Loop of through ADH
c) Reabsorption of water in DCT and CT through ADH
d) All of the above

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



Human urinary system

a) A-Ureter, B-Inferior vana cava, C-Dorsal aorta, D-Urethra, E-Medulla
b) A-Ureter, B-Inferior vana cava, C-Dorsal aorta, D-Pelvis, E-Urethra
c) A-Ureter, B-Inferior vana cava, C-Dorsal aorta, D-Urethra, E-Pelvis
d) A-Ureter, B-Inferior vana cava, E-Pelvis, D-Dorsal aorta, E-Urethra

133. Excretory product of spider is
a) Uric acid b) Ammonia c) Guanine d) None of these

134. Henle's loop of nephron plays a significant role in maintaining a high osmolarity in
a) Interstitial fluid of hilum b) Medullary interstitial fluid
c) Cortex interstitial fluid d) All of the above

135. Micturition reflex is a neural mechanism to
a) Release sweat b) Formation of urine
c) Release urine d) Release inorganic substance to the urine

136. Choose the right option for A, B, C from given options

Stretch receptors on walls of urinary bladder send signal to
↓
A
↓
and It passes on to
↓
B
↓
To initiate the contraction of smooth muscle of bladder and simultaneous
↓
C
of urethral spincter cause the release of urine

a) A-CNS, B-Motor message, C-Extraction b) A-ANS, B-Motor message, C-Relaxation
c) A-PNS, B-Motor message, C-Extraction d) A-CNS, B-Motor message, C-Relaxation

137. Identify the wrong statements about human excretory system and choose the correct option accordingly
I. Kidneys are reddish brown and bean-shaped structure
II. Kidneys are situated between the last thoracic and third lumber vertebra
III. Each kidney of an adult human measures 10-12 cm in length, 5-7 cm in width, 2-3 cm thickness, and average weight 120-170 gram
a) I and II b) II and III c) III and I d) None of these

138. The region of the nephrons found in the renal medulla is
a) Malpighian corpuscle b) Proximal convoluted tubule
c) Distal convoluted tubule d) Henle's loop

139. Antennary glands of crustaceans are meant for
a) Excretion b) Respiration c) Digestion d) Circulation

140. Functional kidney of frog tadpole is
a) Archipheros b) Pronephros c) Mesonephros d) Metanephros

141. Specific gravity of urine normally is
a) 1.010-1.015 b) 1.015-1.020 c) 1.020-1.025 d) Both (a) and (b)

142. During hemodialysis process
I. blood drained from a convenient artery and anticoagulant is added (heparin)
II. removal of nitrogenous waste from blood
III. blood is passed through a coiled porous cellophane membrane of tube bathing in dialysis fluid
IV. blood is mixed with antiheparin and passed into vein
Arrange the steps
a) I→II→III→IV b) IV→III→II→I c) I→III→II→IV d) I→IV→II→III

143. 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 tuble
d) The ascending limb and descending limb

144. Which one of the following statements is false?
a) Presence of albumin in urine is albuminuria
b) Presence of glucose in urine is glycosuria
c) Presence of ketone sugar in urine is Ketonuria
d) Presence of excess urea in blood is uremia

145. I. Reabsorption of water occurs passively in the initial segment of nephron
II. Nitrogenous waste are absorbed by active transport
III. Conditional reabsorption of Na^+ and water takes place in DCT
IV. DCT reabsorbs glucose
V. DCT is capable of selective secretion of H^+, K^+ and NH_3 to maintain pH and $Na^+ - K^+$ balance in blood
VI. Substances like glucose, amino acids, Na^+, etc, in the filtrate are reabsorbed actively
Choose the option with incorrect statements
a) I and II b) III and IV c) V and VI d) II and IV

146. Each nephron has two parts, which are
a) Bowman's capsule and P C T
b) Glomerulus and renal tubule
c) Glomerulus and Bowman's capsule
d) Bowman's capsule and renal tubule

147. Identify the correct statements
I. The outer layer of the kidney is called capsule
II. Cortex is divided into outer cortex and inner medulla
III. Medulla is divided into medullary pyramids
IV. The cortex extends in between the medullary pyramids which is called as columns of Bertini
Choose the correct option accordingly
a) I, III and IV b) I and IV c) I, II and III d) I, II, III and IV

148. Out of the four parts given below, which parts play significant role in forming concentrated urine in human?
I. Loop of Henle
II. Glomerulus
III. Bowman's capsule
IV. Vasa recta
The correct option is
a) I and II b) III and IV c) II and III d) I and IV

149. Aldosterone causes conditional reabsorption of ….. in the distal part of tubule
a) CO_2 b) Ca^{2+} c) Na^+ d) Cl^-

150. Alkaptonuria is a condition in which
a) Accumulation of homogenestic acid in blood
b) Excretion of homogenestic acid in sweat
c) Excretion of homogenestic acid in urine
d) All of the above

151. Sweat produced by sweat glands is a watery fluid which contain
a) NaCl b) Urea c) Lactic acid d) All of the above

152. GFR (Glomerular Filtration Rate) is the amount of filtrate formed by the kidney per
a) Hour b) Second c) Minute d) 10 seconds

153. Ammonia produced by metabolism is convered into the ...A... in the ...B... in ureotelic and released into the blood, which is filtered and excreted out by ...C...
Choose the appropriate options for A, B and C to complete the given NCERT statement
a) A-uric acid, B-spleen, C-kidney b) A-uric acid, B-liver, C-kidney
c) A-urea, B-liver, C-kidney d) A-urea, B-spleen, C-kidney

154. How much percentage of the filtrate is reabsorbed in the renal tubules?
a) 5% b) 25% c) 90% d) 99%

155. Which one of the following statements is correct with respect to salt water balance inside the body of living organisms?
a) When water is not available camels do not produce urine but store urea in tissues
b) Salmon fish excretes lot of stored salt through gill membrane when in fresh water
c) *Paramecium* discharges concentrated salt solution by contractile vacuoles
d) The body fluids of freshwater animals are generally hypotonic to surrounding water

156. Find the correct option regarding mechanism of urine formation in man.
a) The glomerular filtration rate is about 125 mL/min
b) The ultra filtration is opposed by the colloidal osmotic pressure of plasma
c) Tubular secretion takes place in the PCT
d) Aldosterone induces greater reabsorption of sodium

157. pH of urine (average pH) is
a) 7.0 b) 6.5 c) 7.5 d) 6.0

158. If one liter of water is introduced in human blood, then
a) BMR increases b) RBC collapses and urine production increases
c) RBC collapses and urine production decreases d) BMR decreases

159. Large amount of water is ...A... from collecting duct to produce ...B... urine. This segment allows passage of small amounts of ...C... into interstitium of medulla to keep up the osmolarity.
Here, A, B and C refers to
a) A-secreted, B-dilute, C-sugar b) A-secreted, B-dilute, C-NH_3
c) A-secreted, B-dilute, C-urea d) A-reabsorbed, B-concentrated, C-urea

160. I. Glucose
II. Amino acid
III. Na^+
IV. Nitrogenous waste
Which of them reabsorbed actively in the nephron?
Choose the correct option
a) I and II b) I, II and III c) I and III d) Only I

161. Reabsorption of water in DCT and CT part of nephron is function of
a) Prolactin b) Oxytocin
c) Vasopressin d) Luteinising hormone

162. Choose the false statement
a) Tubular cells secretes H^+, K^+, ammonia to filtrate
b) Tubular cells helps to maintain the acid base balance of the body fluid
c) Tubular cells helps in ionic balance
d) Tubular secretion is not very important step in urine formation

163. In micturition,
a) Urethra relaxes b) Ureter relaxes c) Ureter contracts d) Urethra contracts

164. Haemodialysis is associated with
a) Liver b) Spleen c) Kidney d) Stomach

165. Glomerular filtrate is

a) Blood minus blood corpuscles and plasma protein
b) Blood minus corpuscles
c) Mixture of water, ammonia and corpuscles
d) Urine

166. ANF mechanism checks on
a) Oxytocin – renin mechanism
b) Counter – current mechanism
c) Renin – angiotensin mechanism
d) Oxytocin – angiotensin mechanism

167. Urine formed by nephornes is ultimately carried to ...A... where at stored fill a voluntary signal is given by the ...B... . This signal is initiated by ...C... of urinary bladder as it gets filled with urine.
Choose the correct option for A, B and C to complete the given NCERT statement
a) A-urethra, B-CNS, C-PNS
b) A-urinary bladder, B-CNS, C-stretching
c) A-urethra, B-CNS, C-stretching
d) A-urethra, B-CNS, C-ANS

168. Renal portal system is
a) Present in all vertebrates
b) Present in all chordates
c) Absent in mammals
d) Present in all mammals

169. Which of the following features activates the JG cells?
I. Fall in GBR II. Fall in GBF
III. Fall in GFR
Choose the correct option
a) I and II b) II and III c) I and III d) I, II and III

170. In majority, juxta-medullary nephrons are found in the kidney of
a) Kangaroo rat b) Camel c) Both (a) and (b) d) Fishes

171. Renal calculi is
a) Soluble mass of crystallised salts in kidney
b) Soluble mass of protein in kidney
c) Insoluble mass of proteins in kidney
d) Insoluble mass of crystallised in kidney

172. Our lungs releas
a) 18 L of O_2 every day
b) 18 L of CO_2 every day
c) 10 L of CO_2 every day
d) 10 L of O_2 every day

173. Layers between the glomerular and Bowman's capsule through which the filtration takes place are
I. endothelium of the glomerular blood vessel
II. middle lamella
III. basement membrane between the endothelium of glomerular blood vessels and epithelium of the Bowman's capsule
IV. epithelium of the Bowman's capsule
a) I, II and III b) II, III and IV c) I, III and IV d) I, II and IV

174. The conversion of dangerous nitrogenous waste into less toxic excretory matter is carried out in man in the
a) Blood b) Liver c) Kidney d) Skin

175. Osmoreceptores in the body is activated by the changes in
I. blood volume
II. body fluid volume
III. ionic concentration
The option containing correct statements is
a) I and II b) I and III c) III and II d) All of these

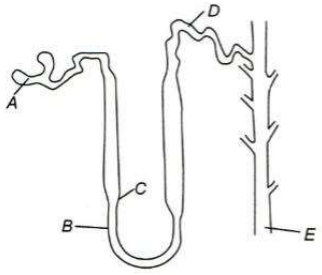
176. Choose the mismatched part of nephron with their function
a) Bowman's capsule – Glomerular filtration
b) PCT – Aeabsorption of Na^+ and K^+
c) DCT – Aeabsorption of glucose
d) Loop of Henle – Urine concentration

177. On an average the amount of urea in gram excreted out per day is
a) 25-30 gm b) 30-35 gm c) 20-25 gm d) 35-40 gm

178. Uremia is accumulation of urea in

a) Liver b) Blood c) Kidney d) Bone joints

179. Study the given structure of a nephron and match the level A, B, C and D with the given statement I, II, III and IV. Then choose the correct option from the codes given below



I. Podocyte are present through which filterate generated
II. Glomerulus filtrate is concentrate in descending limb of loop of Henle
III. Glomerular filtrate is diluted in ascending limb of loop of Henle
IV. Juxtra-glomerular apparatus is found

codes

A B C D
a) I II III IV b) I II IV III
c) II III I IV d) III II IV I

180. Urine formation involves
I. glomerular filtration
II. tubular reabsorption
III. tubular secretion
Choose the correct option for the above statements
a) I and II b) II and III c) I and III d) I, II and III

181. The shape of vasa recta is
a) L-shaped b) U-shaped c) S-shaped d) J-shaped

182. Animal which excrete urea, produced during metabolism of amino acid, belongs to
a) Ureotelism b) Uricotelism c) Ammonotelism d) Aminotelism

183. RASS secretes which of the following hormone?
a) Mineralocorticoids b) Glucocorticoids c) Both (a) and (b) d) None of the above

184. Choose the correct statement
I. Flame cell is a specialised excretory organ in flatworms
II. Bundles of flame cells are called protonephridia.
The correct option is
a) Only I b) Only II c) I and II d) Neither I nor II

185. Which term is used both for a part of kidney and a part of skeleton in the mammals?
a) Centrum b) Pelvis c) Cortex d) Medulla

186. Excretion of bile pigments in the urine indicates
a) Rickets b) Jaundice c) Diabetes d) Anaemia

187. The proximity between Henle's loop and vasa-recta as well as the counter current in them help in maintain an ...A... in molarity towards inner interstitium medullary, region, *i. e.*, from ...B... mos mol^{-1} in the cortex to about ...C... m mol^{-1} in the inner medulla
Here a, b and c refers to
a) A-increasing, B-500, C-800 b) A-decreasing, B-300, C-1200
c) A-decreasing, B-1200, C-300 d) A-increasing, B-300, C-1200

188. Out of
I. PCT II. DCT
III. Loop of Henle IV. Collecting duct
Which contributes most in maintaining pH of blood?
a) I and II b) II and III c) III and IV d) I and IV

189. A man takes large amount of proteins. He is likely to excrete a greater amount of
a) Urea b) Uric acid c) Sugar d) None of these

190. Excretion means
a) Formation of those substances which have some role in the body
b) Removal of such substances which have never been part of the body
c) Removal of useless substances and substances present in excess
d) All of the above

191. Renin is released by
a) Hypothalamus b) Posterior lobe of pituitary
c) Anterior lobe of pituitary d) J G cells

192. If Henle's loop were 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

193. PCT is lined by
a) Cuboidal epithelium b) Squamous epithelium
c) Columnar epithelium d) Stratified epithelium

194. Which of the following disorder is an outcome of irregularities in metabolism of the nitrogenous waste?
a) Osteoporosis b) Gouty arthritis
c) Osteroarthritis d) Rheumatoid arthritis

195. Juxtaglomerular cells of renal cortex synthesize an enzyme called
a) ADH b) Oxytocin c) Rennin d) Urochrome

196. In majority of nephrons, the loop of Henley's is found in the
a) Cortical region of the kidney b) Medullary region of the kidney
c) Both (a) and (b) d) Pelvis region of the kidney

197. Osmoregulation is the function of
a) Oxytocin b) ADH c) Prolactin d) Both (a) and (b)

198. An increase in the body fluid volume can switch off the …A… and …B… the ADH release. In this way complete the …C…
Choose the correct option for A, B and C
a) A-osmoreceptors, B-increase, C-feedback b) A-osmoreceptors, B-suppress, C-feedback
c) A-kidney filtration, B-increase, C-feedback d) A-kidney filtration, B-suppress, C-feedback

199. Which of the following is first formed nitrogenous waste of vertebrate?
a) NH_2 b) Urea c) NH_3 d) NH_4

200. Urine is concentrated in which part of nephron
a) CT b) PCT c) Bowman's capsule d) JGA

201. The condition where urea accumulates in blood is
a) Glycosuria b) Uremia c) Ketonuria d) Acidosis

202. A bird excretes nitrogenous waste materials in the form of
a) Uric acid b) Ammonia c) Urea d) Amino acids

203. In human, the waste products of nucleotide metabolism are excreted as
a) Ammonia b) Uric acid c) Urea d) Amino acid

204. Among ammonia, uric acid and urea; which one needs the least amount of water to excrete?
a) Ammonia b) Uric acid c) Urea d) Both (b) and (c)

205. I. Excess loss of water from body
II. Hypothalamus
III. Osmoreceptors
IV. ADH
V. Neurohypophysis

VI. Water reabsorption DCT and CT
VII. Prevention of diuresis
Arrange the given processes in correct sequence for regulation in kidney
a) I→II→III→IV→V→VI→VII
b) VII→VI→V→IV→III→II→I
c) I→III→II→V→IV→VI→VII
d) I→III→II→IV→V→VII→VI

206. Angiotensin-II being a powerful ...A... increase the glomerular blood pressure and there by ...B... .
Angiotensin-II also activates the adrenal cortex to release ...C... .
Find the correct for A, B and C
a) A-vasodilator, B-GFR, C-vasopressin
b) A-vasodilator, B-GFR, C-aldosterone
c) A-vasoconstrictor, B-GFR, C-aldosterone
d) A-vasoconstrictor, B-GFR, C- vasopressin

207. Urine is concentrated in
a) Kidney
b) Liver
c) Colon
d) Heart

208. Which one of the following is not a part of a renal pyramid?
a) Convoluted tubules
b) Collecting ducts
c) Hanle's loop
d) Peritubular capillaries

209. Primary function of sweat in humans is
a) Excretion
b) Cooling of skin
c) Both of (a) and (b)
d) Removal of urea

210. Which of the following are secreted by liver?
I. Bilirubin
II. Biliverdin
III. Cholesterol
IV. Degraded steroid hormone
V. Vitamin
VI. Drug
Choose the correct option
a) I, II, III and IV
b) II, III, IV and V
c) III, IV, V and VI
d) I, II, III, IV, V and VI

211. Functions of ADH
I. reabsorption of water from distal tubules
II. secretion of water from distal tubules
III. construction of blood vessels
IV. dilatation of blood vessels
V. increase the blood flow
VI. decrease the blood flow
Choose the correct combination of given functions from given option
a) I, III, IV and V
b) I, IV and V
c) I, III and V
d) II, IV and VI

212. Which of the following is responsible for excretion of dilute urine?
a) More secretion of insulin
b) Less secretion of vasopressin
c) More secretion of Aldosterone
d) Less secretion of glucagon

213. The size of filtration slits of glomerulus is
a) 10 nm
b) 15 nm
c) 20 nm
d) 25 nm

214. Indication of diabetes mellitus is/are
a) Presence of glucose in urine
b) Presence of ketone bodies in urine
c) Presence of amino acid in urine
d) Both (a) and (b)

215. The vital morphological and physiological units of mammalian kidney are
a) Ureters
b) Uriniferous tubule
c) Nephridia
d) Seminiferous tubules

216. If you take large amount of protein then you will likely to excrete large amount of the
a) Uric acid
b) Urea
c) Ammonia
d) Amino acid

217. Choose the correct option from given options in referenced to haemodialysis
I. Blood pumped back to suitable artery

II. Heparin is used after haemodialysis
III. Nitrogenous waste are removed by active transport
IV. The dialysis unit has coiled cello phone tube
V. Blood is pumped into dialysing unit from the artery
The correct option is
a) I, II and III b) II, IV and V c) III and IV d) IV and V

218. Major nitrogenous waste product in ureotelic animals like rabbit and other mammals is
a) Uric acid b) Urea c) Ammonia d) Amino acids

219. Urea cycle was discovered in
a) 1940 b) 1945 c) 1950 d) 1932

220. Glomerular area of adrenal cortex is responsible for
a) Water and electrolyte balance b) Carbohydrate metabolism
c) Steroid and hormone secretion d) Blood pressure

221. Filtration in Malpighian body of the nephrons involves
a) One layer b) Two layer c) Three layer d) Four layer

222. Podocytes are the cells present in
a) Cortex of nephron b) Inner wall of Bowman's capsule
c) Outer wall of Bowman's capsule d) Wall of glomerular capillaries

223. The characteristic that is shared by urea, uric acid and ammonia is/are
I. They are nitrogenous wastes.
II.They all need very large amount of water for excretion.
III.They are all equally toxic.
IV. They are equally in the kidneys.
a) I and III b) I and IV c) I, III and IV d) I only

224. Uricotelic mode of passing out nitrogenous wastes is found in
a) Birds and annelids b) Amphibians and reptiles
c) Insects and amphibians d) Reptiles and birds

225. Main function of glomerulus is
a) Filtration of urine b) Reabsorption of H_2O
c) Reabsorption of Na^+ d) Concentration of urine

226. The expulsion of urine from the urinary bladder is called
a) Uricolysis b) Micturition c) Ornithine d) None of these

227. Which one is not correct?
a) Humans-Ureotelic b) Birds-Uricotelic c) Lizards-Uricotelic d) Whale-Ammonotelic

228. ADH is secreted by
a) Anterior lobe of pituitary b) Middle lobe of pituitary
c) Posterior lobe of pituitary d) All of the above

229. The function of Henle's loop is
a) Passage of urine b) Formation of urine
c) Conservation of water d) Filtration of water

230. Choose the correct ones
I. **Afferent arteriole** carries the blood away from the glomerulus toward renal vein
II. **Efferent arteriole** carries the blood to glomerulus
III. **Podocytes** form minute spaces (slit pores) for the filtration of blood into the Bowman's capsule
IV. **In Henle's loop** There are most reabsorption of the major substances from the glomerular filtrate
V. **Distal convoluted tubule** reabsorption K^+ ions into the surrounding blood capillaries
The correct option is
a) I, II and III b) III, IV and V c) Only III d) Only IV

231. Select the right option
a) Nitrogenous excretory products are synthesised in kidney and eliminated in liver

b) Nitrogenous excretory products are synthesised in kidney, and eliminated also
c) Nitrogenous excretory products are synthesised in liver, and eliminated via bile juice
d) Nitrogenous excretory products are synthesised in liver eliminated by kidney

232. Glomerulus is formed by
a) Branch from renal vein
b) Uriniferous tubule
c) Branch from renal artery
d) Coiling of proximal part of uriniferous tubule

233. In uremia condition the urea can be removed by a process called
a) Haemolysis b) Haemodialysis c) Dialysis d) Micturition

234. Which is not correct with respect to human kidney?
a) The peripheral region is called cortex and central medulla
b) Malpighian capsule are present in the cortex region
c) Blood enters glomerulus through efferent arterioles
d) The concave part of kidney is called hilus

235. Composition of urine
I. Water …A%
II. Urea …B%
III. Uric acid …C%
IV. Salt …D%
Choose the right options for A, B, C and D from given options
a) A-90; B-2.0; C-1; D-2
b) A-95; B-2.6; C-0.3; D-1.5
c) A-80; B-2.6; C-0.3; D-1.5
d) A-85; B-2.6; C-0.3; D-1.5

236. What happens in micturition?
a) Contraction of smooth muscles of bladder
b) Relaxation of the urethral sphincter
c) Release of urine
d) All of the above

237. GFR is a healthy individual is
a) 125 mL/min b) 150 L/day c) 125 mL/sec d) 135 L/day

238. Longest loop of Henle is found in
a) Kangaroo rat b) Opossum c) rhesus monkey d) All of these

239. Most of the secretory product of liver ultimately pass out along with
a) Urine b) Digestive wastes c) Urea d) Sweat

240. Guano is
a) Bird's nitrogenous excretion
b) Men's nitrogenous excretion
c) Fish's nitrogenous excretion
d) Amphibian's nitrogenous excretion

241. An increase in blood flow to atria of heart can cause release of …A… causes …B… and there by decrease the blood pressure. ANF mechanism therefore acts as checks on …C…
Here, A – C refers to
a) A-ANF, B-vaso constrictor, C-renin-angiotensis mechanism
b) A-ANF, B-vasodilator, C-renin-angiotensin mechanism
c) A-vasopressin, B-vasodilator, C-renin-angiotensin mechanism
d) A-vasopressin, B-vaso constrictor, C-renin-angiotensin mechanism

242. Which of the following statements is/are true?
I. Urine is hypertonic in distal convoluted tubule.
II. When the urine passes into the collecting tubule, it becomes hypotonic.
III. Urine is isotonic in proximal convoluted tubule.
IV. Urine becomes more and more hypotonic as it passes through the Henle's loop.
a) I and IV b) I, II and III c) II and III d) I only

243. Triazenes are derived from
a) Uric acid b) Urea c) Ammonia d) None of these

244. The human kidney has about
a) One million nephrons
b) Two million nephrons

c) Three million nephrons d) Ten million nephrons

245. In ornithine cycle, which of the following wastes are removed from the blood?
a) Urea and urine b) Ammonia and urea
c) Carbon dioxide and ammonia d) Carbon dioxide and urea

246. Which one of the following groups of structures/organs have similar function?
a) Typhlosole in earthworm, intestinal villi in rat and contractile vacuole in *Amoeba*
b) Nephridia in earthworm, Malpighian tubules in cockroach and urinary tubules in rat
c) Antennae of cockroach, tympanum of frog and clitellum of earthworm
d) Incisors of rat, gizzard (proventriculus) of cockroach and tube feet of starfish

247. Reabsorption of glucose occurs in ….. of the nephron
a) Loop of Henle b) PCT c) DCT d) Collecting duct

248. Read the statements given below
I. Reabsorption in this region in minimum
II. This region plays a significant role in the maintenance of high osmolarity of intestinal fluid
III. Its descending limb is permeable to water but almost impermeable to electrolytes
IV. Its ascending limb is impermeable to water but allows transport of electrolyte actively or passively
V. In descending limb filtrate is hypertonic, while in ascending limb filtrate is hypotonic
The above characteristics are associated with
a) PCT b) Loop of Henle's c) DCT d) Bowman's capsule

249. In 24 hours, total glomerular filtrate formed in the human kidney is
a) 1.7 litres b) 7 litre c) 17 litres d) 170 litres

250. Bowman's capsule is found in
a) Glomerulus b) Uriniferous tubule
c) Nephron d) Malpighian capsule

251. Glucose is mainly absorbed in
a) PCT b) DCT c) Henle's loop d) Nephron

252. PCT helps in the maintenance of pH in the body fluid by
a) Selective secretion of H^+ ions b) Selective secretion of ammonia
c) Selective secretion of K^+ ions d) All of the above

253. Blackening of urine, when exposed to air is a metabolic disorder in human beings. This is due to
a) Phenylalanine b) Tyrosine
c) Valine replacing glutamine d) Homogentisic acid

254. Many freshwater animals cannot live for long in sea water and *vice versa* mainly because of the
a) Change in N levels b) Change in the levels of thermal tolerance
c) Variations in light intensity d) Osmotic problems

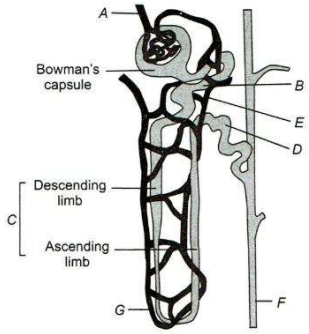
255. The medullary gradient tis mainly caused by
a) NaCl and urea b) H^+ and K^+ c) Urea and K^+ d) Urea and H^+

256. The process of release of urine is called
a) Micturition b) Sweatening c) Defeciation d) Perspiring

257. The ascending and descending limb of Henle's loop is a respectively lined by
a) Squamous epithelium, cuboidal epithelium b) Cuboidal epithelium, sequamous epithelium
c) Ciliated epithelium, sequamous epithelium d) Cuboidal epithelium, ciliated epithelium

258. Malpighian tubules are
a) Excretory organs of insects b) Excretory organs of frog
c) Respiratory organs of insects d) Endocrine glands of insects

259. Study the given structure and match A, B, C, D, E, F and G with correct option



a) A-Afferent arteriole, B-Proximal convulated tubule, C-Henle's loop, D-Distal convulated tubule, E-Peritubular capillaries, F-Collecting duct, G-Vasa recta
b) A-Efferent arteriole, B-PCT, C-Henle's loop, D-DCT, E-Peritubular capillaries, F-Collecting duct, G-Vasa recta
c) A-Afferent arteriole, B-Peritubular capillaries, C-Henle's loop, D-DCT, E-PCT, F-Collecting duct, G-Vasa recta
d) A-Afferent arteriole, B-Henle's loop, C-Collecting duct, D-PCT, E-DCT, F-Peritubular capillaries, G-Vasa recta

260. In juxta-medullary nephrons,
a) Vasa recta is prominent
b) Loop of Henle is long
c) Loop of Henle runs deep into the medulla
d) All of the above

261. Choose the correct option from given statement
I. Glomerular filtrationrate is 125 mL/min
II. Ultrafiltration is opposed by colloidal osmotic pressure of plasma
III. Tubular secretion takes place in loop in Henle
IV. Tubular secretion takes place in glomerulus
V. Aldosterone induces greater sodium reabsorption
The correct option is
a) III, IV and V
b) I, IV and V
c) I, II and V
d) I, II and III

262. Almost all the aquatic animals excrete ammonia as the nitrogenous waste product. Which of the following statements is not in agreement with this situation?
a) Ammonia is easily soluble in water
b) Ammonia is released from the body in gaseous state
c) Ammonia is highly toxic and needs to be eliminated as and when formed
d) Ammonia gets converted into a less toxic form called urea

263. Which one is the excretory organ in the following?
a) Archaeocyte
b) Choanocyte
c) Pinacocyte
d) Solenocyte

264. In cortical nephrons,
a) Loop of Henle is short
b) Loop of Henle is long
c) The PCT is very long
d) Th DCT is short

265. Other than kidney which of the following organs help in elimination of excretory wastes?
I. Lungs
II. Liver
III. Skin
IV. Spleen
Choose the correct option containing all correct organs
a) I, II and III
b) II, III and IV
c) I, III and IV
d) I, II and IV

266. The stage of ornithine cycle at which arginase enzyme is used?
a) Ornithine →citrulline
b) Arginine →ornithine
c) Citrulline →arginosuccinic acid
d) Ornithine →urea

267. The structural unit of human kidney is

a) Nephron b) Ureter c) Loop of Henle d) Bowman's capsule

268. Chick excrete their secretion in the form of
a) Ammonia b) Urea c) Uric acid d) Crystal of guanine

269. Which of the following organs synthesises urea?
a) Duodenum b) Kidney c) Liver d) Pancreas

270. Primary or main excretory organ in humans is
a) Skin b) Lung c) Kidney d) Spleen

271. Which of the following is right statement?
I. Angiotensin-II, being a powerful vasoconstrictor, increases glomerular pressure and thereby GFR
II. Angiotensin-II 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
Select right combination
a) I, II and III b) I, II and IV c) I, III and IV d) II, III and IV

272. Glomerular filtrate rate per day is
a) 150 L b) 190 L c) 170 L d) 180 L

273. The rupture of urinary bladder is prevented by
a) Pseudostratified epithelium b) stratified columnar epithelium
c) Stratified cuboidal epithelium d) Transitional epithelium

274. Glomerulonephritis is
a) Bleeding of glomeruli of kidney b) Absence of glomeruli of kidney
c) Inflammation of glomeruli of kidney d) Inflammation of PCT of kidney

275. Glomerular filtration occurs in Bowman's capsule when
Hydrostatic pressure of Net filtrate pressure blood in glomerulus is
a) 70 mm Hg 10 mm Hg b) 70 mm Hg 25 mm Hg
c) 70 mm Hg 40 mm Hg d) 70 mm Hg 30 mm Hg

276. Choose the correct option containing compounds of ornithine cycle from the options given below
a) Ornithine, citrulline and fumaric acid b) Ornithine, citrulline and alanine
c) Ornithine, citrulline and arginine d) Ornithine, citrulline and tyrosine

277. Sodium reabsorption from the distal tubule will be increased if there is an increase in
a) Plasma potassium concentration b) Plasma volume
c) Mean arterial pressure d) Urine flow rate

278. The principle nitrogenous excretory compound in humans is synthesized
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

279. Largest gland of our body is
a) Spleen b) Lung c) Liver d) kidney

280. A person who is on a long hunger strike and is surviving only on water, will have?
a) More sodium in his urine b) Less amino acids in his urine
c) More glucose in his blood d) Less urea in his urine

281. A terrestrial animal must be able to
a) Excrete large amounts of water in urine b) Conserve water
c) Actively pump out salts through the skin d) Excrete large amounts of salts in urine

282. Human urine as compared to human blood is
a) Hypotonic b) Hypertonic c) Isotonic d) All of these

283. Wolffian body is also known as
a) Pronephros b) Mesonephros c) Metanephros d) Abnormal heart

284. Which one of the following body functions is not performed by kidneys?
    a) Excretion
    b) Osmoregulation
    c) Regulation of blood volume
    d) Destruction of dead blood corpuscles
285. Ultrafiltrate generated by the glomerulus is having all the constituent of the blood plasma except
    a) Protein b) RBC c) WBC d) All of these
286. Which of the following is not an excretory organ?
    a) Liver b) Book lungs c) Kidney d) Hepatopancreas
287. Podocytes are present on the
    a) Endothelial cells of the glomerulus b) Endothelial cells of the Bowman's capsule
    c) Epithelium cells of the Bowman's capsule d) Epithelium cells of the glomerulus
288. The functioning of the kidneys is efficiently monitored and regulated by the hormonal feedback mechanism involving
    a) Hypothalamus b) JGA c) Heart d) All of the above
289. In which part of nephron, reabsorption is minimum from filtrate?
    a) Henle's loop b) Proximal convoluted tubule
    c) Distal convoluted tubule d) Collecting duct
290. Animal accumulates waste like urea, uric acid, CO_2, H_2O, ions like Na^+, K^+, Cl^-, phosphate, sulphate, etc., by
    a) Metabolic activities b) Excess ingestion c) Either (a) or (b) d) Excretion
291. Which of the following structures are situated in the cortical region of the kidney?
    I. Malpighian corpuscle
    II. PCT (Proximal Convoluted Tubules)
    III. DCT (Distal Convoluted Tubules)
    IV. Loop of Henle
    V. Collecting duct
    a) I, II and III b) III, IV and V c) II, III and IV d) IV, V and I
292. Normal level of urea in blood plasma is
    a) 80-100 mg/100 mL blood b) 18-38 mg/100 mL blood
    c) 30-40 mg/100 mL blood d) 1-10 mg/100 mL blood