

THEMI HILL SECONDARY SCHOOL
BIOLOGY REVISION QUESTIONS
FORM THREE 2020

SECTION A

Define the following terms as applied in biology;

1. Excretion
2. Urine formation
3. Regulation
4. Osmoregulation
5. Excretory organs
6. Vasoconstriction
7. Vasodilation
8. Urinary system
9. Homeostasis
10. Thermoregulation
11. Hyperthermia
12. Hypothermia
13. Panting
14. Homoiothermic
15. Poikilothermic

Respond to the following questions with the required brief information, and not related information.

16. Give examples of excretory products eliminated by organisms
17. Mention the excretory organ in human being.
18. Describe the process of urine formation.
19. Describe the urinary system.
20. Mention Common complications and disorders of the excretory system.
21. Explain the causes, symptoms, effects, and control measures of common complications and disorders of excretory system.
22. Mention the types of excretory products eliminated by plants.
23. Mention various types of regulation.
24. Explain the concept of temperature regulation In animals.
25. Describe the mechanism of temperature regulation in mammals.
25. Mention the factors which affect the content of salts and water in the body.
26. Explain the mechanism of regulating sugar levels in blood.
27. Outline the causes, symptoms, and effects of low sugar levels in the blood.

28. Outline the causes, symptoms and effects of high sugar levels in blood.
29. Outline the causes, symptoms, and effects of low sugar levels in the blood.
30. The functional unit of the kidney is a

For each of the following organs indicate the appropriate excretory product.

31. Lungs
32. Kidneys
33. Skin
34. Liver

SECTION B

35. Differentiate between urethra and ureter.
36. Mention the constituents of glomerular filtrate.
37. What is selective Reabsorption
38. Why is the afferent arteriole in the urinary system larger than the narrow efferent arteriole.
39. Why aquatic animals have more glomeruli and a shorter loop of henle.
40. Why aquatic animals have more glomeruli and a shorter loop of henle?
41. Plants do not need an elaborate excretory system like that of animals. Explain

Explain what Will happen to a human if ;

42. Glomeruli are reduced to only few.
43. The pores of the skin are blocked.
44. The pancreas does not produce enough insulin .
45. Why is the proximal convulated tubule coiled .?
46. Explain how the urinary System is able to carry out its functions.
47. Briefly explain on (4) importance of regulation.
48. Briefly explain on the physical means through which heat is lost or gained.
49. Differentiate between vasoconstriction and vasodilation.
50. Briefly explain on hibernation in terms of regulation.

SECTION C

MULTIPLE CHOICE

51. Maintenance of constant internal environment means;
 - A) Osmoregulation B) Re-absorption
 - C) Homeostatic D) secretion
52. Useful substances are retained in hte kidney by;
 - A) Filtration B) Osmosis
 - C) Selective reabsorption

D) Diffusion

53. Which of the following is not an excretory product in plants

A) Tannin B) Carbon dioxide

C) urea D) calcium oxalate

E) latex

54. A rise in the body temperature of a human body is corrected by

A: Constriction of the skin arteries and sweating

B: Constriction of the skin arteries and shivering

C: Dilation of the skin arteries and sweating

D: Dilation of the skin arteries and shivering

E: Shivering and sweating

55. Glucagon is produced in

A: Beta cells of the pancreas

B: Alpha cells of the pancreas

C: Medulla of the kidneys

D: the cortex of kidneys

55. In human beings, osmoregulation is controlled by the hypothalamus and pituitary gland working together with the

A) Liver B) Hind brain

C) Pancreas D) kidneys

56. When the body produces too much ADH the content of water in the blood will be.....

A) reduced B) remain unchanged

C) Increased D) None of the above

57. Two hormones that are involved in temperature regulation in human beings are

A) thyroxine and oxytocin

B) Oxytocin and adrenaline

C) Adrenaline and Oxytocin

D) Adrenaline and thyroxine

58. Basking in the sun is an example of

A) behavioral mechanism of temperature regulation

B) physiological mechanism of temperature regulation

C) Hormonal mechanism of temperature regulation

D) physical mechanism of temperature regulation

59. The breakdown of glycogen in the body is due to action of

A): Insulin B) Adrenaline

C) secretion D) Glucagon

E) Gastric

60. The kidney in animals is mainly responsible for...

- A) Excretion B) Digestion
- C) Transportation D) Respiration
- E) Absorption

SECTION

What is the role of the following in excretion in plants

- 61. Lenticels
- 62. Stomata
- 63. Vacuoles

Define the following terms

- 64. Tubular secretion
- 65. Dialysis
- 66. Ultrafiltration

Briefly explain on the following

- 67. Describe the function of glomeruli in the kidneys
- 68. Outline the processes involved in the formation of urine
- 69. In hot season less quantity of urine is produced than in cold.
- 70. What remedial measures are followed if a person is showing symptoms of dehydration.
- 72. Why is osmoregulation important
- 73. Describe the structure of the human kidney
- 74. The elimination of water by the kidney machine may be considered to be both excretion and osmoregulation.
- 75. Discuss the role of nephron in osmoregulation .
- 76. Explain the role of anti-diuretic hormone in osmoregulation.
- 77. Name the hormones which controls the concentration of sodium salts in the human body.
- 78. What is the loop of henle.
- 79. What is the role of AdH in forming hypertonic urine.
- 80. Name the artery and vein which supply blood to the kidney and collect blood from the kidney respectively.
- 81. Name the hormone that regulates the formation of urine in nephron.
- 82. Name the two types of diabetes.
- 83. "Longer the loop of henle, the more the hypertonic urine produced." Is this statement true or false ? If false rewrite it correctly
- 84. A kidney consists of numerous functional units called ..
- 85. A nephron consists of four regions. Mention them
- 86. Blood enters the glomerulus through its arteriole and leaves through itsarteriole.

87. Filtration of blood in the kidney occurs in the
88. Sweat serves mainly to eliminateand.....
89. Reabsorption of glucose and amino acids occurs in the part of the nephron by the process called
90. Urine formation involves three processes. Mention them.

Write T for the correct statement and F for the incorrect statement.

91. Longer the loop of henle, urine will be hypertonic.
92. ADH helps in water elimination making urine hypotonic.
93. Glucose is actively reabsorbed in the proximal convoluted tubule.
94. Henle's loop plays an important role in the concentration of the urine.
95. Glucose is actively reabsorbed in the proximal convoluted tubule.
96. Desert animals have a shorter loop of henle and much glomeruli
97. A person consuming alcohols pass out a concentrated quantity of urine at a fewer quantity.
98. Excretion of ammonia is done by the liver.
99. The functional unit of the kidney is called urethra.
100. Oxytocin hormone is responsible for water Reabsorption, when one feels thirsty.