

NOTE: There are three sections of this paper. Carefully read the instructions for each section and attempt accordingly. Attempt all questions of Section-A and return it to the Superintendent within given time, even if you have not attempted any question. Select the correct choice and write only A, B, C or D, whichever is appropriate, in the answer box. No marks will be awarded for cutting/erasing or overwriting.

SECTION-A

Time: 20 Minutes

Marks: 18

1. Which of the following is the last structure that urine passes through during its excretion from the body?
 A) distal tubule, B) urethra, C) urinary bladder, D) ureter B
2. An animal that warm itself mainly by absorbing heat from its surrounding is known as: A) homeotherm,
 B) ectotherm, C) endotherm, D) heterotherm B
3. Every person has human leukocyte antigens. A) 46, B) 23, C) 8, D) 6 D
4. Which of the following is a cerebral nerve? A) vagus nerve, B) cervical, C) lumbar, D) thoracic A
5. In marine fishes the divalent are excreted by: A) kidney, B) skin, C) gills, D) none of these A
6. CO₂ is transported by haemoglobin in form. A) carbamino Hb, B) Carboxy Hb,
 C) Carbondioxide Hb, D) carboxdiglobin B
7. 100CC of blood when fully saturated with oxygen, contains CC of oxygen.
 A) 15, B) 20, C) 25, D) 10 B
8. The adrenal cortex produces A) adrenaline, B) aldosterone, C) epinephrine, D) calcitonin B
9. After forced expiration, the volume of air remain in the lungs is A) 500 ml, B) 1.5 litre,
 C) 5 litre, D) 3 litre B
10. In which form transport of CO₂ takes place in the blood. A) carbonic acid, B) bicarbonate ions,
 C) hydrogen ions, D) oxyhaemoglobin B
11. Which is the most important mechanism for water loss from the body? A) sneezing,
 B) excretion in urine, C) elimination in faeces, D) sweating B D
12. The electrical potential of cell membrane of neuron, when it is not transmitting any signal is called:
 A) synapse, B) propagation of impulse, C) action potential, D) resting membrane potential D
13. Approximately% of CO₂ is carried in the blood as bicarbonate ion. A) 60, B) 70, C) 80, D) 97 ... B
14. Human lungs are spongy due to the presence of million of: A) bronchi, B) alveoli, C) bronchioles,
 D) trachea B
15. is a hypoglycemic agent. A) glycogen, B) glucagon, C) glucose, D) insulin B
16. Most prominent symptom of Alzheimer's disease is: A) pain, B) dementia, C) inflammation,
 D) uncontrolled cell division B
17. The number of linkage group in man is: A) 02, B) 23, C) 46, D) 92 B
18. Ability of an organism to tolerate dehydration for certain period of time is known as: A) hydrobiosis,
 B) anhydrobiosis, C) biosis, D) hydration B

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BIOLOGY (New Book)
PART-II

Time: 2 Hours 40 Minutes

SECTION-B

Marks: 40

1. Attempt any ten of the following. All carry equal marks.
- i. What is ectopic pregnancy?
 - ii. What is intrinsic biological clock?
 - iii. Shortly describe the structure of forebrain.
 - iv. How does transmission of nerve impulse occur across synapse?
 - v. Define arthritis. Write down four symptoms and two causes of arthritis.
 - vi. How are the extra-embryonic membranes formed?
 - vii. How is rule of addition used in genetic?
 - viii. How did Edward Jenner prepare the first vaccine?
 - ix. Differentiate between cardiac and smooth muscles.
 - x. Define ecological succession. Give its types.
 - xi. Briefly describe the impact of UV-Radiation on human health.
 - xii. What are the benefits of human genome project?
 - xiii. What are subunit vaccines?

SECTION-C

Marks: 27

NOTE: Attempt any three of the following questions. All questions carry equal marks.

2. Discuss the structure and function of female reproductive system.
3. Critically analyse the history of chromosome theory of inheritance.
4.
 - i. What are the components of PCR technique?
 - ii. Differentiate between structure of gene and chromosome.
5. Why is pituitary gland known as master gland? Explain in detail.