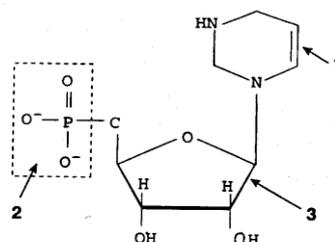


- Which of these digestive enzymes are active under strongly acidic conditions?  
A – pepsin      B – chymotrypsin      C – maltase      D – lipase
- Which segment of the nephron is impermeable to water?:  
A – ascending arm loop of Henle      B – descending arm of the loop of Henle  
C – Bowman’s capsule      D – proximal tubule
- Which of these substances inhibits the synthesis of viral proteins in infected cells and help block viral replication?:  
A – thrombin      B – interferon      C – histamines      D – heparin
- Example of a transversion mutation is:  
A – conversion of adenine to guanine  
B – conversion of thymine to adenine  
C – conversion of cytosine to thymine  
D – conversion of cytosine to uracil
- The process by which one strain of bacteria is apparently changed into another strain is called:  
A – transcription  
B – replication  
C – transformation  
D – translation
- Which of the following **does not** describe the structure of DNA?:  
A – contains adenine-uracil pairs  
B – double helix  
C – nucleotide polymer  
D – double stranded
- Nondisjunction – the most common error in meiosis may be the cause:  
A – Huntington’s disease  
B – „ Cri du chat „ syndrome  
C – Turner’s syndrome  
D – colorblindness

8. The figure shows:

- nucleotide
- deoxyribose and phosphate group
- sugar-phosphate backbone
- ribose and phosphate group



9. Number 1 on the graph above shows:

- phosphate group
- purine
- pyrimidine
- deoxyribose

10. The observation that in DNA  $A=T$  and  $G=C$  became known as..... rule:  
A – Brenner's  
B – Hershey's  
C – Chargraff's  
D – Gilbert's
11. A peculiar feature of nervous tissue is:  
A – ability to contract  
B – ability to transmit impulses throughout the body almost instantaneously  
C – origin of the three germ layers  
D – secretion of many hormones
12. Blood pressure is lowest in the:  
A – heart  
B – arteries  
C – veins  
D – capillaries
13. The tissue that covers the body and lines its internal cavities and some internal organs is :  
A – connective tissue  
B – muscular tissue  
C – supporting tissue  
D – epithelial tissue
14. Thyroxin is unusual amino acid in that contains:  
A – iodine    B – iron    C – magnesium    D – calcium
15. In women, FSH stimulates:  
A – formation of corpus luteum  
B – production of ovarian follicles  
C – secretion of milk from mammary glands  
D – growth of uterine lining
16. Elephant tusks are transformed:  
A – molars        B – canines        C – premolars        D – incisors
17. Mammary glands in mammals evolved from:  
A – fragrant glands    B – sebaceous glands    C – sweat glands    D – mucous glands
18. Biological significance of sexual reproduction is primarily:  
A. ensuring the continuity of the species  
B. emergence of new combinations of genes  
C. receiving the greatest number of offspring  
D. survival of adverse environmental conditions

19. Leydig's cells are present in:  
 A – ovaries      B – pancreas      C – epididymis      D – testis
20. All of the following prevent pathogens from entering the human body **except**:  
 A – tears      B – skin      C – red blood cells      D – sweat glands
21. During intense exercise the muscles of a man are exposed to the oxygen deficit and lactic acid is formed. This compound causes muscle fatigue experienced as pain. Lactic acid enters the blood and then is transported to:  
 A – kidney and is excreted in the urine  
 B – liver, where it is converted in the urea cycle  
 C – kidney and is accumulates in the renal pelvis  
 D – liver, where it is converted into glucose
22. Unfavorable interaction for both species is:  
 A – commensalism  
 B – mutualism  
 C – parasitism  
 D – competition
23. Which of the following contains its own DNA molecules:  
 A – mitochondrion  
 B – endoplasmic reticulum  
 C – chloroplast  
 D – correct answers A and C
24. For the synthesis of mRNA was used a DNA fragment having a nucleotide sequence: AGACTAGACTGC, anticodons of tRNA will follow:  
 A – UCUGAUCUGACG  
 B – AGACUAGACUGC  
 C – CUCAGCUCAGUA  
 D – TCTGATCTGACG
25. How does blood flow through the rabbit pulmonary circulation?:  
 A – left ventricle - pulmonary vein - pulmonary capillaries - pulmonary artery - right atrium  
 B – right ventricle - pulmonary trunk - pulmonary arteries - pulmonary capillaries - pulmonary veins - left atrium  
 C – left atrium - left ventricle - aorta - pulmonary capillaries - pulmonary artery - right atrium  
 D – right ventricle - pulmonary trunk - pulmonary veins - pulmonary capillaries - pulmonary arteries - left atrium