

## Class 12

### I. Проведение собеседования

### II. Grammar

#### Task 1. Choose the correct verb form (Active or Passive Voice)

1. Cells (make up/ are made up) tissues and organs. 2. The microscope (will use/ will be used) in the next practical class. 3. All vital physiological functions (perform are performed) by cells. 4. Small units of tissues (discovered/ were discovered) by Robert Hooke. 5. A cell (surrounds/ is surrounded by) the extracellular fluid. 6. This student (performs /is performed) many laboratory works every week. 7. The last classes (attended / were attended by) these students. 8. A cell (synthesizes/ is synthesized) a great number of protein molecules. 9. Proteins (encode/are encoded) by the genes. 10. A cell (copies / is copied by) its genetic information for a new cell. 11. New properties (acquire / are acquired) due to the mutations. 12) Postgraduate (involved/ was involved) internship two years ago. 13) Our University (will get/ will be got) wider international links soon. 14) Cellular biology (examines/ is examined by) the basic blocks of life.

#### Task 2. Put the verb into the correct form (Active or Passive Voice)

1) Biology (sustain) life on the planet. 2) The status of Academy (grant) to the Institute in 1993. 3) We (get) training in all branches of biology in the following 4 years. 4) Biologists (begin) to study living things many centuries ago. 5) Pharmacists and nurses (train) by our medical college. 6) Traits of relatives (inherit) by children. 7) The University (have) three research centers in a year. 8) The interaction of molecules (study) by Molecular biology. 9) Better varieties of plants and animals (develop) by biologists soon. 10) This organism (interact) with its environment. 11) Students (master) their specialty in the following clinical years. 12) Great contribution to science (make) by the biologists of the past. 13) The course of studies (vary) from five to six years. 14) The staff of the department (include) highly qualified specialists.

### III. Vocabulary

#### Task 3. Learn the new words and word combinations

double helix - двойная спираль

due to - благодаря

enzyme - фермент

genetic - генетический

heredity - наследование, наследственность

inheritance - наследственность

manifestation – проявление, выражение

nucleic acid - нуклеиновая кислота

nucleotide - нуклеотид

offspring - потомство, потомок

phenomenon (*pl* -phenomena) - явление

selection - отбор

sequence - последовательность  
similarity - сходство  
species - вид, виды  
strand - нить, цепь, цепочка  
to adapt - адаптироваться  
to arise - возникать, появляться  
to carry - переносить, нести  
to combine - объединять, совмещать  
to determine - определять  
to find (found, found) out – выяснять, обнаруживать  
to meet the demands - соответствовать требованиям  
to preserve - сохранять  
to prove - доказывать  
to reassert - перегруппировывать  
variability - изменчивость  
variety - разнообразие

**Task 4.** Translate into Russian

To reassert nucleotide strands, sequence of genes, manifestation of inheritance, similarity of species, due to variability, to carry enzymes, to meet the demands of environment, selection of the offspring, to preserve variety.

**Task 5.** Read and translate the text

**Inheritance**

The phenomenon of similarities between children and their parents is the manifestation of heredity. So, the offspring has two sets of genetic information – from both parents.

New species are formed by adaptation of existing forms. The changes arise due to the natural selection. Without this variety and selection species could not adapt to meet the changing demands of the environment.

The paradox of inheritance is the ability to combine the genetic stability needed to preserve useful characteristics with the genetic variability necessary for evolution. So, it is necessary to have hereditary units which are stable, but which can be reasserted in a variety of ways.

In 1944 Avery, McCarty and McCleod found out that nucleic acid carry genetic information. In 1952 Hershey and Chase proved that DNA is the hereditary material. And in 1953 Watson and Crick formulated the detailed structure of DNA.

DNA is a double helix of two nucleotide strands where the pentose sugar is always deoxyribose and the organic bases are adenine, guanine, cytosine and thymine, but never uracil.

All species have different DNA and produce different enzymes. The DNA sequence is a code that determines which proteins are produced. Gene is a hereditary unit which is a part of the DNA molecule.

**Task 6.** Make the word combinations. Sometimes more than 1 combination is possible with the same word.

1) to meet the changing demands	a) of heredity
2) two sets of	b) with the genetic variability
3) the phenomenon of	c) of two nucleotide strands
4) to combine the genetic stability	d) genetic information
5) adaptation of	e) similarities
6) manifestation	f) existing forms
7) a double helix	g) of the environment