List of topics for admission testing in English

Grammar

1. Verb Tenses (Active and Passive)
   - Simple/Indefinite Tenses
   - Continuous Tenses
   - Perfect Tenses
   - Perfect Continuous Tenses

2. Verb forms
   - Infinitive
   - Gerund
   - Participle

3. Modal verbs
   - Can / Could
   - May / Might
   - Must
   - Have to / Have got to
   - Be to
   - Need
   - Ought to
   - Should
   - Would
4. Noun

5. Article
   - Definite article
   - Indefinite article
   - Zero article

6. Adjective and adverb

7. Pronoun
   - Personal
   - Possessive
   - Reflexive
   - Demonstrative

8. Reported speech

9. Clauses
   - Adjective clauses
   - Adverb clauses
   - Noun clauses
   - Defining/Non-defining relative clauses

10. Conditionals
    - First conditional
    - Second conditional
    - Third conditional
    - Zero conditional

English vocabulary on topics:
   - Body parts
   - Musculoskeletal system
   - Cardiovascular system
   - Respiratory system
   - Sensory organs
   - Digestive system
   - Nervous system
   - Endocrine system
List of topics related to Biology

1. DNA structure and functions
2. Name the main characteristics of RNA. RNA types and their functions.
3. Describe the fluid-mosaic model of membrane structure
4. Describe the structures of the cytoplasm of an eukaryotic cell
5. Membrane-bounded organelles of an eukaryotic cell, their structure and functions.
6. Nonmembrane-bounded organelles of an eukaryotic cell, their structure and functions
7. Describe the structure of a nucleus of an eukaryotic cell, and give a function for each part mentioned.
9. Describe the events that occur during the stages of mitosis. Biological significance of mitosis.
10. Describe the stages of both meiosis I and meiosis II in details. Biological significance of meiosis.
11. Define the words: heredity and variability
12. State Mendel’s law of dominance
13. State Mendel’s law of segregation
14. State Mendel’s law of independent assortment
15. Mutational variability
List of topics related to Chemistry

Inorganic chemistry

2. Chemical element. Simple substances and complex compounds. The phenomenon of allotropes.
4. The law of mass conservation. Its use in chemical calculations and practice.
5. Avogadro’s law and its consequences. The concept of normal conditions with respect to gases.
12. The structure of Periodic System by D.I. Mendeleev. Change of chemical elements atoms properties (radius, ionization energy, electron affinity, electronegativity) and their compounds in groups and periods of the Periodic System.
14. Reversible chemical reaction. Chemical equilibrium and conditions that affect the shift of chemical equilibrium. Le Chatelier’s principle.
15. Rate of chemical reactions. Dependency of chemical reaction rate of temperature.
16. Rate of chemical reactions. The phenomenon of catalysis and catalysts.
17. Rate of chemical reactions. The dependency of reaction rate of reactants nature and concentration.
23. Chemical properties of acids, bases and salts.
24. Hydrogen, its physical and chemical properties. Laboratory synthesis of hydrogen and its uses.
25. Halogens, their comparative characteristics based on their position in the Periodic System and the structure of atoms. Chemical properties of the example of chlorine.
27. General characteristics of VIA group elements. Sulfur, its physical and chemical properties.
28. General characteristics of VA group elements. Nitrogen, its physical and chemical properties.
30. General characteristics of elements IVA group elements. Carbon, its physical and chemical properties. Allotropic forms of carbon. Carbon (II) and (IV) oxides and their chemical properties.
31. General characteristics of IVA group elements. Silicon oxide (IV) and silicic acid. Silicates.

**Fundamentals of Organic Chemistry**
1. The theory of chemical structure of organic substances by A.M. Butlerov.
5. Alkanes. Physical and chemical properties of alkanes (on the example of methane and ethane oxidation and substitution reactions).

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