

11. SYLLABUS (in case the entrance test shall be conducted by the Board):

The entrance test is based on the courses of study and syllabi of 10th class. It is given as under along with broad weight-age of each subject in the question paper of the Entrance Test.

Note: The marks distribution given in the syllabus is only illustrative. It will not accrue any right to the candidate, if this distribution of marks is not strictly reflected in the question paper.

ENGLISH

NO. OF QUESTIONS: 20

• PRONOUNS-TYPE & USES	03 Questions
• CONJUNCTION-TYPES & USES	03 Questions
• MODAL AUXILIARIES & THEIR USES	02 Questions
• REPORTED SPEECH-CHANGES IN VERBS AND OTHER CHANGES	03 Questions
• CLAUSES-TYPES OF CLAUSES AND THEIR USES	02 Questions
• SENTENCE PATTERNS	03 Questions
• PAST PERFECT-USES	02 Questions
• TO-INFINITIVE AND ING FORMS	02 Questions

PHYSICS

NO. OF QUESTIONS: 20

UNIT-1: LIGHT-REFLECTION AND REFRACTION **04 Questions**

- Reflection of Light, spherical mirrors; Image formation; uses of spherical mirrors.
- Sign conventions for spherical mirrors; relation between focal length and radius of curvature; mirror formula (only relation) (Numerical problems); magnification.
- Refraction of Light, refraction through a glass slab, refractive index, Conditions for no refraction.
- Spherical Lenses, Image formation, sign conventions, lens formula (only relation) (Numerical Problems), Magnification (Numerical Problems), power of lenses (Numerical Problems).

UNIT-2: THE HUMAN EYE AND THE COLOURFUL WORLD **04 Questions**

- Human eye; power of accommodation; defects of vision and their correction.
- Glass prism (refraction and dispersion)
- Atmospheric refraction-twinkling of stars and colour of sun at sun rise and sun set.

UNIT-3: ELECTRICITY **04 Questions**

- Concept of electric charge;
- Electric current; electric potential and potential difference;

- Ohm's law and experimental verification; resistance and its dependence; combination of resistances (in series and in parallel) (Numerical Problems)
- Heating effect of current-Electric power and energy (Numerical Problems)

UNIT-4: MAGNETIC EFFECTS OF CURRENT

04 Questions

- Orsted Experiment; Magnetic field and field lines.
- Magnetic field due to a current carrying-Straight, coil (loop) and solenoid (qualitative only).
- Force on a current carrying conductor in a magnetic field.
- Electric Motor; Domestic electric circuits

UNIT-5: SOURCES OF ENERGY

04 Questions

- Various sources of energy; Conventional sources of energy; improvement in technology for using conventional sources of energy (Biomass and wind energy).
- Non-conventional sources of energy (Solar energy, Energy from sea).
- Nuclear energy (Nuclear fusion and nuclear fission).
- Lasting of energy sources.

CHEMISTRY

NO. OF QUESTIONS: 40

UNIT-1: CHEMICAL REACTIONS AND EQUATION

08 Questions

- Chemical equation, writing of chemical equation; Balancing chemical equations.
- Types of chemical reactions; Viz. Combination reactions; Decomposition reactions;
- Displacement reactions; Double displacement reactions; Oxidation and reduction.
- Effects of oxidation and reduction reactions in everyday life, viz. corrosion and rancidity

UNIT-2: PERIODIC CLASSIFICATION OF ELEMENTS

08 Questions

- Early attempts regarding classification of elements; like O'Debornier triads, New lands law of octaves (Non Evaluating)
- Mendeleev's periodic table its achievements and limitations.
- Modern periodic table; position of elements trends in modern periodic table viz. valency, Atomic size, Metallic and non-metallic properties

UNIT-3: CARBON AND ITS COMPOUNDS

08 Questions

- Bonding in Carbon, Covalent bond, Allotropes of carbon;
- Versatile nature of carbon; Saturated and unsaturated hydrocarbons; chains; Branches and rings; homologous series and its characteristics; nomenclature of Carbon compounds.
- Chemical properties of carbon compounds viz. combustion; oxidation; Addition and substitution reactions.
- Important Carbon compounds like Ethane and Ethanoic acid. Properties of Ethanol and Ethanoic acid, Soaps and Detergents.

UNIT-4: METALS AND NON-METALS

08 Questions

- Physical properties of metals and non-metals.
- Chemical properties of metals like action of water, air, acids, salts; Reactivity series of metals.
- Cause of reactivity of metals and non-metals. Properties of ionic compounds.
- Occurrence of metals; their extraction, enrichment of ores, Extraction of metals in accordance with activity series; refining of metals.
- Corrosion of metals and its prevention.

UNIT-5: ACIDS BASES AND SALTS

08 Questions

- Idea about acids and bases; chemical properties of acids and bases viz. Action of metals, metal carbonates, metal hydrogen carbonates (only in case of acids), metallic acids; non-metallic acids and bases.
- Similarities in acids and bases; reaction of acids and bases with water.
- Strength of acids and base solutions; pH and its importance.
- Idea of salts, types and pH. Chemicals from common salts like Sodium Hydroxide, Baking soda and Washing soda & Plaster of Paris.

BIOLOGY

NO. OF QUESTIONS: 40

UNIT 1: LIFE PROCESS

08 Questions

- What are life processes? Nutrition-Autotrophic Nutrition
- Heterotrophic Nutrition. How do animals obtain their nutrition?
- Nutrition in Human beings.
- Respiration, Transportation: Transportation in plants.
- Excretion: Excretion in Human beings, Excretion in plants.

UNIT 2: CONTROL AND CO-ORDINATION

08 Questions

- Animals-Nervous System, what happens in Reflex Action?
- Human Brain. How are these tissues protected? How does Nervous tissue cause action?
- Coordination in plants, immediate response to stimulus, movements due to growth.
- Hormones in Animals.

UNIT 3: HOW DO ORGANISMS REPRODUCE

08 Questions

- The importance of variation. Modes of reproduction used by unicellular organisms. Fission, Fragmentation, Regeneration, Vegetative Propagation, Budding, Spore Formation.
- Sexual Reproduction: Why the sexual mode of reproduction? Reproduction in human Beings.
- Male Reproductive System, Female Reproductive System. What happens when the egg is not fertilized? Reproductive Health.

UNIT 4: HEREDITY AND GENETICS

08 Questions

- Accumulation of variation reproduction, Heredity: Inherited traits, Rules for the inheritance of traits, Mendel's contribution. Now do these traits get expressed?
- Sex determination, Acquired and inherited traits.
- Speciation. Classification, tracing evolutionary relationship, fossils, evolution by stages.

UNIT 5: OUR ENVIRONMENT

08 Questions

- Environment and Ecosystem. What are its components? Food chains and webs. How do our activities effect the environment?
- Ozone layer and how it is getting depleted.
- Managing the garbage, we produce.

12. DETERMINATION OF MERIT:

- ❖ Merit list shall be prepared on the basis of aggregate marks obtained in qualifying examination (10th class) by the candidates, (in case entrance examination is not conducted) in case two or more candidates have equal marks in 10th class, then their tie shall be resolved by taking into account of their D.O.B (date of birth). Candidate older in age shall be placed at first position followed by D.O.B of other candidates in decreasing order. For further tie, the first alphabet of candidate's name shall be given preferences.
- ❖ If the entrance examination is conducted, the selection of candidates for admission to the programme will depend on their performance at the entrance test. The Board shall prepare list in order of inter-se merit of candidates in the entrance test in descending order for the general category and similarly for each reserved category separately;
- ❖ For the purposes of allotment of seats to the reserved category candidates in Government Paramedical College/ Institution, inter-se-merit within each reserved category shall be taken into consideration;
- ❖ In the event of the number of candidates belonging to a reserved category being less than the number of seats available for the category, the resultant vacancies shall be filled from amongst the candidates figuring in the open merit category strictly in order of merit;
- ❖ In case two or more candidates have obtained the same number of marks in entrance test, the inter-se-merit of such candidates shall be determined by taking into account:
 - Marks obtained in Biology component of the Entrance test;
 - Marks obtained in Chemistry component of the Entrance test, if marks obtained in Biology component are equal;
 - Marks obtained in Physics component of the Entrance test if marks obtained in Biology, Physics, Chemistry components are equal;
 - Candidate older in age if marks obtained in Biology, Chemistry and Physics are same.
 - For further Tie, the first alphabet of candidate's name shall be given preference.

13. DECLARATION OF RESULT (in case the entrance test shall be conducted by the Board):

After the conclusion of Entrance Test, the answer key shall be displayed on BOPEE's website in the evening of date of conduct of (various Para-Medical Diploma Courses) -2025 or up to 12 noon on next day and shall remain on website for three days so that a candidate finding any discrepancy in the Question Paper and Answer Key can submit representation along with proper proof from standard text book within three working days after the test is over in the BOPEE's office at Srinagar or Jammu accompanied with the payment receipt of **Rs.**