Bangladesh Mathematics and Science Olympiad (BdMSO)

BdMSO Syllabus 2025

Organizer
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BdMSO SYLLABUS

Mathematics:

1. **Arithmetic**

Whole numbers, Rational numbers and their representations (fraction, decimals, and percentages), pattern recognition, Factors and Multiples, Greatest Common Divisor, Least Common Multiples, Ordering of numbers, and Ratio and Proportion

2. **Geometry**

Properties of polygons (Triangle, quadrilateral, parallelogram, trapezium) and circles

- Angle and its measure
- Area and Perimeter of different polygons
- Symmetry, reflection and rotation, similarity and proportion Properties solid figures
- Nets of a cube, and parallelepiped
- Symmetry, reflection and rotation, similarity, and proportion

3. **Data and Measurement**

- Data representation and interpretation
- Mean, median, and mode of a set of data

4. **Counting Techniques**

5. **Recreational Mathematics**

Science

1. **Science skills and methodology:** general health (nutrition, common disease, and prevention)

2. **General environmental issues**: deforestation, managing natural resource pollution, water and carbon cycle, etc

3. **Basic ecology**: habitat, interaction, food chain and food web, population, ecosystem, life cycle, etc

4. **Physiology:** photosynthesis and respiration.

5. **Current technological developments**: GMOs, biotech, biofuel, satellites, etc.

6. **Human anatomy and functions**: skeleton and movement, olfactory system, auditory system, mouth, eyes, circulatory, digestive system, skin, respiratory system) and its disease and problems.

7. **Classifying organisms:** based on their food, anatomy, systematics, reproduction system and its habitat.

8. **Mechanics**: motion of objects, static fluid and gas

9. **Solar system**: members of the solar system, rotation of earth and moon, earth and moon eclipses

10. **Planet Earth:** structure, surface, the process of earth formation, water cycle, renewable resources, climate, seasons, gravitation, wind

11. **Electricity and magnetism**: applications, models

12.**Matter**: properties, phase transformation (solid, liquid, gas) physical, chemical, and biological transformation)

13. **Thermal properties**: temperature, thermometer, energy, conduction, convection, radiation

14.**Light**: property, vision, color

15. **Forces**: change in shape, magnetic, gravitation, frictional forces

16. **Energy and energy changes**: kinetic, potential, heat, sound, renewable, energy conversion