

## **Dhaka Commerce College**

### **Online Chemistry Exam Syllabus**

Time: 30 minute, Method: MCQ, Format: Google Form

#### **Chemistry- 1<sup>st</sup> Paper**

##### **Qualitative Chemistry**

1. Rutherford  $\alpha$  particle scattering experiment
2. Rutherford's atom model
3. Bohr's atom model
4. Comparison between Rutherford's and Bohr's atom model
5. Quantum Number
6. Atom and its fundamental particles
7. Atomic number, Atomic mass number & Relative atomic mass
8. Energy levels of different orbitals & their shapes
9. Electron configuration
10. Aufbau principle
11. Hund's rule
12. Pauli's exclusion principle
13. Electro Magnetic spectrum
14. Different region of electro-magnetic spectrum
15. Detection of elements from line spectrum
16. Hydrogen spectrum

#### **Chemistry- 2nd Paper**

##### **Environmental Chemistry**

1. Structure & Composition of atmosphere
2. Cyclone & storm surge
3. Gaseous state
4. Characteristics of gases
5. Units of volume, temperature & pressure
6. Boyle's law
7. Charles's law
8. Avogadro's law
9. Ideal gas equation
10. Partial pressure of a gas & Dalton's law
11. Graham's law of effusion
12. Kinetic Molecular theory of gases
13. Root-Mean-Square & other velocities of gases
14. Calculation of kinetic energy of gas molecule
15. Ideal gas & real gas
16. Amagat's experiment with real gases
17. Compressibility factor

##### **Organic Chemistry**

1. Organic compounds & vital force theory
2. Specialty of Carbon to form organic compounds
3. Classification of organic compounds
4. Homologous series
5. Functional groups
6. Nomenclature of Alkane, Alkene & Alkyne