The Eaglehouse Academy

**Subject: Chemistry Class: 8th, 9th**

**Marks: 30 Time: 3hr**

Section “A” Multiple choice question (MCQs)

**Choose the correct answer for each from the given question: (Marks: 6)**

1. Number of sub-shell in M-shell is:
2. One b. two c. three d. four
3. This is non-polar covalent compound:
4. HF b. H2O c. HCL d. CO2
5. Leakage of helium gas through gas balloons is an example of:
6. Diffusion b. Effusion c. Evaporation d. Mobility
7. It is a type of dipole-dipole interaction:
8. Covalent bond b. Hydrogen bonding c. Metallic bond d. Ionic bond
9. The branch of chemistry that deal with the compounds in living organisms is called as:
10. Analytical chemistry b. Biochemistry c. organic chemistry d. physical chemistry
11. The symbol of “silver” is:
12. Ag b. Au c. SI d. Sn
13. Electronic configuration is the distribution of:
14. Proton b. Positron c. Neutron d. Electron
15. Blood is one of the following:
16. Mixture b. Compound c. Element d. Metal
17. It is considered as the fourth state of matter:
18. Solid b. Liquid c. Gas d. Plasma
19. Dobereiner arranged elements in:
20. Group and periods b. Triads c. Sub-group d. Octaves
21. It is the lightest particle of an atom:
22. Proton b. Photon c. Electron d. Neutron
23. The vertical columns of the modern periodic table are called:
24. Group b. Period c. Series d. Rows

Section “B” (Short Answer Question) Marks: 12

**Note: Answer any eight questions from this section. Each question carries 1.5 marks.**

1. Write three sentences on the importance of chemistry?
2. What is atomic radius? Discuss its trend across the period and group in the periodic table.
3. Calculate the number of atoms presents in **9.2g** of calcium? (Atomic mass of Ca= 40).
4. Balance the following chemical equations:
5. **Ca + O2 CaO**
6. **NH3 + O2 NO + H2O**
7. **KCLO3 KCL + O2**
8. Write down three properties of cathode rays?
9. Write down the chemical formula of the following compounds:
10. Sugar b. lime stone c. sand d. caustic soda e. washing soda
11. The pressure of a sample gas is **3atm** and the volume is **5litre**. If the pressure is reduced to **2atm** then what would be its new volume?
12. What are isotopes? Describe isotopes of chlorine or Uranium.
13. Write down the electronic configuration of the following elements:
14. **11Na**  b. **6C** c. **16S**
15. Calculate the number of moles and number of molecules present in **45grams** of glucose **(C6H12O6)?**
16. Draw electronic dot and cross structures of following molecules:
17. H**2**  b. N**2**  c. H**2**O
18. Write down the electronic configuration of the following elements according to the Bohr,s atomic model.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Elements** | **Atomic numbers** | **K 1st shell** | **L 2nd shell** | **M 3rd shell** |
| **Hydrogen** |  |  |  |  |
| **oxygen** |  |  |  |  |
| **Sodium** |  |  |  |  |

Section “C” (Detailed - Answer Question) Marks: 12

**Note: Answer any four questions from this section. Each carries 3 marks.**

1. Define Charle**,**s law of gases and explain mathematical representation of it?
2. Write down six postulates of Bohr,s atomic model?
3. Explain the importance of glues and epoxy resins in our society?
4. Define chemistry and list any five branches of it and explain them?
5. What is coordinate covalent bond? Explain it by the formation of ammonium ion(NH4+) and hydronium ion (H3O+)
6. Write the name of the elements of group **“I-A”** of the periodic tables. What does the group I-A elements called in the periodic table. Write four general properties of this group?

The Eaglehouse Academy

**Subject: Biology Class: 8th, 9th**

**Marks: 30 Time: 3hrs**

Section “A” Multiple choice question (MCQs)

**Choose the correct answer for each from the given question: (Marks: 6)**

1. Biological name of cat is:
2. Fellis catus b. Alium cepa c. Azadiracha indica d. Canis itipis
3. Sequence of physiological changes by which cell commit suicide:
4. Necrosis b. Apomixes c. Apoptosis d. Diakinesis
5. Science of identification and classification of organism is:
6. Histology b. Cytology c. Taxonomy d. Anatomy
7. Biological method involves all of the following, except:
8. Data collection b. Observation c. Experiment d. Proportion
9. Phenomenon in which pair of homologous chromosome fails to separate is called:
10. Non disjunction b. synapses c. terminalization d. Linkage
11. This one is not a multicellular organism:
12. Cat b. Toad c. Frog d. Amoeba
13. Laws and techniques of physics are applied to explain the living process is called:
14. Biometry b.Bio-physics c. Bio-statistics d. Bio-Economics
15. Stage of mitosis in which chromatids reach the poles and their movement cases, is called:
16. Prophase b. Metaphase c. Anaphase d. Telophase
17. Part of a root between epidermis and endodermis is called:
18. Xylem b. Phloem c. Comblum d. Cortex
19. Volvox is a poly-phyletic genus of:
20. Green Algae b. Red Algae c. Brown Algae d. None of these
21. The cell organelle that is found in animals cells and helps in intracellular digestion is called:
22. Ribosome b. Lysosome c. Mitochondria d. Golgi bodies
23. Scientific name of frog is:
24. Palaeon b. Rana tigrina c. Periplaneta d. Pheratima

Section “B” (Short Answer Question) Marks: 12

**Note: Answer any eight questions from this section. Each question carries 1.5 marks.**

1. Define the following:
2. Parasitology b. Genetics c. Environmental Biology
3. Write three fundamental postulates of cell theory?
4. Explain the biological method with the help of a flow chart?
5. Draw a neat and labelled diagram of “Amoeba”?
6. Write the translation of any two Quranic Ayah about plants and animals?
7. Define plastids and write its types?
8. Define biodiversity and its importance?
9. Draw a neat and labelled diagram of mitochondria?
10. Write different types of chromosome with their diagrams?
11. Write three differences between prokaryotic cell and eukaryotic cell?
12. Describe any three causes of deforestation?
13. Make a flow chart, showing different levels of organization living things?

Section “C” (Detailed - Answer Question) Marks: 12

**Note: Answer any four questions from this section. Each carries 3 marks.**

1. Describe five kingdom classification?
2. Define mitosis. Name and define different stages of its with diagram of each?
3. Explain muscle tissues and its types in detail?
4. What is tissue? Point out plant tissues with the help of flow chart
5. Define biology. Name the branches of biology of it and explain any five branches?
6. Write down the short note of any two
7. Golgi bodies b. Mitochondria c. Chloroplast d. Endoplasmic reticulum

The Eaglehouse Academy

**Subject: Physics Class: 8th, 9th**

**Marks: 30 Time: 3hrs**

Section “A” Multiple choice question (MCQs)

**Choose the correct answer for each from the given question: (Marks: 6)**

1. Which one of the following is a vector quantity?
2. Time b. Force c. Mass d. Distance
3. It is not a unit of pressure:
4. Pascal b. Bar c. Atmosphere d. Newton
5. Rate of change of displacement is called:
6. Acceleration b. Speed c. Velocity d. Deceleration
7. An object of **10kg** mass is moving with a velocity of **10m/s**, its momentum will be:
8. **0Ns b. 20Ns c. 30Ns d. 100Ns**
9. **24** Inch is equal to:
10. **1ft b. 2ft c. 3ft d. 4ft**
11. The angle between rectangular components of a vector is:
12. **30° b. 45° c. 60° d. 90°**
13. A burning candle is an example of this state of matter:
14. Gas b. Liquid c. Solid d. All of these
15. **91.60** has significant numbers:
16. 2 b. 3 c. 4 d. 5
17. Friction opposes motion between two bodies in contact because of:
18. Charge on bodies b. weight of bodies c. Roughness of surface d. Mass of bodies
19. The pressure in a fluid depends upon:
20. Depth b. Density c. Gravitational acceleration d. All of these
21. The least count of micrometer screw gauge is:
22. **0.1cm b. 0.1mm c. 0.01cm d. 0.01mm**
23. Heat is a form of:
24. Energy b. Power c. Force d. Momentum

Section “B” (Short Answer Question) Marks: 12

**Note: Answer any eight questions from this section. Each question carries 1.5 marks.**

1. Define: a. Atomic physics b. Nuclear physics c. Plasma physics
2. Write down any three difference between Translatory motion and vibrating motion?
3. A force of **3400N** is applied on a body of mass is **85000g.** Find the acceleration produced by the force?
4. A spring has spring constant **K= 30N/m**. What load is required to produce an extension of **4m**?
5. What is momentum? Write its formula and S.I unit?
6. A man is pushing a Trolley for a horizontal ground with a force of **100N** making an angle of **60°** with ground. Find the horizontal and vertical components of the force?
7. A car starts from rest and after **30 seconds** its velocity becomes **108km/h.** Find the acceleration of the car?
8. Write three state of equilibium?
9. A bus starts from rest and travels along a straight path its velocity becomes **15m/s** in **5 seconds.** Calculate acceleration of the bus?
10. Define fundamental and derived quantities. Also write three examples of each?
11. At what speed must an object travel in a circle of radius 3meter to experience a centripetal acceleration of **12m/s2**?
12. Calculate the spring constant which extends by a distance of **3.5cm** when a load of **14N** hung ham its end?

Section “C” (Detailed - Answer Question) Marks: 12

**Note: Answer any four questions from this section. Each carries 3 marks.**

1. State Pascal,s law. Describe construction and working of a hydraulic lift with the help of a diagram?
2. Define equilibrium. Explain its types and any one condition?
3. What is kinematics? Derive the equation.

**S = Vit + 1/2 at2**

16.Write down the advantages and disadvantages of friction?

17.State Newton,s second law of motion and derive its equation?

18.Which process is the reverse of resolution of a force? Define it also prove that:

**F = and θ = tan-1**