Practice Question Set For A-Level
**Subject : Chemistry**
**Paper-1 Topic: Physical 1**

Merit Minds
www.merit-minds.com
Exam Preparation and Free Resources

**Name of the Student**:_____
**Max. Marks : 15 Marks** **Time : 15 Minutes**

Q1.

Which statement about inorganic ionic compounds is **always** correct?

**A** They dissolve in water to give neutral solutions. ⬭

**B** They release energy when they melt. ⬭

**C** They contain metal cations. ⬭

**D** They form giant structures. ⬭

**(Total 1 mark)**

Q2.

In which substance do covalent bonds break when it melts?

**A** hexane ⬭

**B** ice ⬭

**C** iodine ⬭

**D** silicon dioxide ⬭

**(Total 1 mark)**

Q3.

In which molecule are all the atoms in the same plane?

**A** $CH_3CHO$ ⬭

**B** $CH_3NH_2$ ⬭

**C** $C_6H_5Cl$ ⬭

**D** $C_6H_5CH_3$ ⬭

**(Total 1 mark)**

Q4.

Which substance contains delocalised electrons?

Downloaded from www.merit-minds.com

**A** cyclohexane ⬭

**B** graphite ⬭

**C** iodine ⬭

**D** sodium chloride ⬭

**(Total 1 mark)**

Q5.

Which molecule has a permanent dipole?

**A** $BF_3$ ⬭

**B** $NH_3$ ⬭

**C** $SiCl_4$ ⬭

**D** $SO_3$ ⬭

**(Total 1 mark)**

Q6.

Which polymer has hydrogen bonding between the polymer chains?

**A** Kevlar ⬭

**B** PVC ⬭

**C** poly(phenylethene) ⬭

**D** Terylene ⬭

**(Total 1 mark)**

Q7.

Which statement is **not** correct?

**A** $CuCl_4^{2-}$ is square planar. ⬭

**B** $NH_4^+$ is tetrahedral. ⬭

**C** $[Co(H_2NCH_2CH_2NH_2)_3]^{2+}$ is octahedral. ⬭

**D** $[Fe(H_2O)_6]^{2+}$ is octahedral. ⬭

**(Total 1 mark)**

Q8.

Which is **not** responsible for conduction of electricity?

**A** The sodium ions in molten sodium chloride ⬭

Downloaded from www.merit-minds.com

**B** The electrons between layers of carbon atoms in graphite ⬭

**C** The bonding electrons in a metal ⬭

**D** The lone pair electrons on water molecules ⬭

**(Total 1 mark)**

Q9.

An aqueous solution of a salt gives a white precipitate when mixed with aqueous silver nitrate and when mixed with dilute sulfuric acid.

Which could be the formula of the salt?

**A** $BaCl_2$ ⬭

**B** $(NH_4)_2SO_4$ ⬭

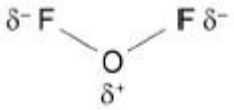
**C** KCl ⬭

**D** $Sr(NO_3)_2$ ⬭

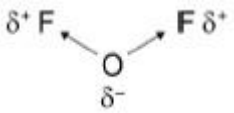
**(Total 1 mark)**

Q10.

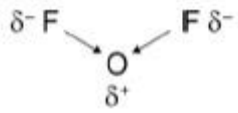
Which diagram shows the correct bonding and correct bond polarity in a molecule of oxygen difluoride?

**A** 

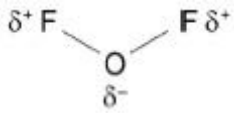
⬭

**B** 

⬭

**C** 

⬭

**D** 

⬭

**(Total 1 mark)**

Q11.

Which species has a shape that is influenced by the presence of one or more lone pairs of electrons around the central atom?

**A** $AlCl_3$ ⬭

**B** $ClF_3$ ⬭

Downloaded from www.merit-minds.com

**C** $IF_6^+$ ⬭

**D** $PCl_6^-$ ⬭

**(Total 1 mark)**

Q12.

Which one of the following reactions does **not** involve donation of an electron pair?

**A** $H^+ + CH_3NH_2 \rightarrow CH_3NH_3^+$

**B** $AlCl_3 + Cl^- \rightarrow AlCl_4^-$

**C** $CH_3Cl + CN^- \rightarrow CH_3CN + Cl^-$

**D** $\frac{1}{2}Cl_2 + I^- \rightarrow Cl^- + \frac{1}{2}I_2$

**(Total 1 mark)**

Q13.

Which compound has the highest boiling point?

**A** $CH_3CH_2CH_2OH$ ⬭

**B** $CH_3CH_2CHO$ ⬭

**C** $CH_3COCH_3$ ⬭

**D** $CH_3COOCH_3$ ⬭

**(Total 1 mark)**

Q14.

Which one of the following statements is **not** correct?

**A** The first ionisation energy of iron is greater than its second ionisation energy.

**B** The magnitude of the lattice enthalpy of magnesium oxide is greater than that of barium oxide.

**C** The oxidation state of iron in $[Fe(CN)_6]^{3-}$ is greater than the oxidation state of copper in $[CuCl_2]^-$

**D** The boiling point of $C_3H_8$ is lower than that of $CH_3CH_2OH$

**(Total 1 mark)**

Q15.

Which one of the following does **not** contain any delocalised electrons?

**A** poly(propene)

**B** benzene

**C** graphite

Downloaded from www.merit-minds.com

**D** sodium

**(Total 1 mark)**

Downloaded from www.merit-minds.com