

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 $\text{C}_6\text{H}_5\text{Cl}$

☐

D $\text{C}_6\text{H}_5\text{CH}_3$

☐

(Total 1 mark)

Q4.

Which substance contains delocalised electrons?

- 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 $[\text{Co}(\text{H}_2\text{NCH}_2\text{CH}_2\text{NH}_2)_3]^{2+}$ is octahedral. ☐
- D $[\text{Fe}(\text{H}_2\text{O})_6]^{2+}$ is octahedral. ☐

(Total 1 mark)

Q8.

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

- A The sodium ions in molten sodium chloride ☐

- 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.

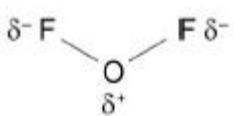
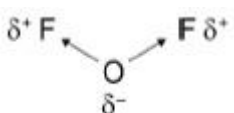
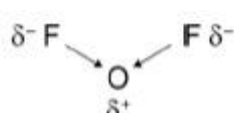
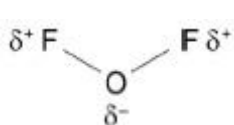
Which could be the formula of the salt?

- A** BaCl_2 ☐
- B** $(\text{NH}_4)_2\text{SO}_4$ ☐
- C** KCl ☐
- D** $\text{Sr}(\text{NO}_3)_2$ ☐

(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?

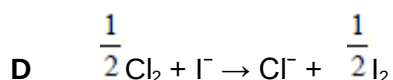
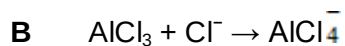
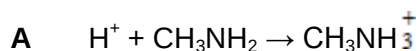
- A** AlCl_3 ☐
- B** ClF_3 ☐



(Total 1 mark)

Q12.

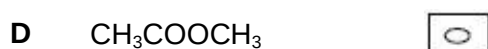
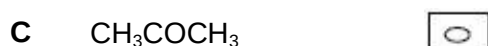
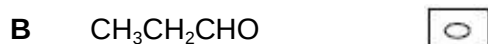
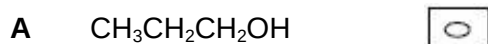
Which one of the following reactions does **not** involve donation of an electron pair?



(Total 1 mark)

Q13.

Which compound has the highest boiling point?



(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 $[\text{Fe}(\text{CN})_6]^{3-}$ is greater than the oxidation state of copper in $[\text{CuCl}_2]^-$

D The boiling point of C_3H_8 is lower than that of $\text{CH}_3\text{CH}_2\text{OH}$

(Total 1 mark)

Q15.

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

A poly(propene)

B benzene

C graphite

D sodium

(Total 1 mark)