National 5 Chemistry Snap Shot Progress Check 1

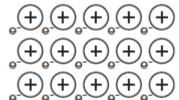


1 The table shows the number of protons, electrons and neutrons in four particles W,X,Y and Z. Which pair are isotopes?

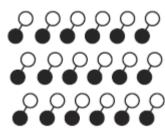
| Particle | Protons | Electrons | Neutrons |
|----------|---------|-----------|----------|
| W | 17 | 17 | 18 |
| Х | 11 | 11 | 12 |
| Υ | 17 | 17 | 20 |
| Z | 18 | 18 | 28 |

- A W and X
- **B** W and Y
- **C** X and Y
- **D** Y and Z
- Which of the following particles contains a different number of electrons from the others? You may wish to use your data book to help you.
- A Cl
- $\mathbf{B} \qquad \mathsf{S}^{\mathsf{2-}}$
- **C** Ar
- **D** Na⁺
- **3** Which of the following diagrams could be used to represent the structure of a covalent network?

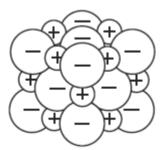
Α



C



В



D



- 4 What is the charge on the nickel ion in NiSO₄?
- **A** +1
- B +2
- **C** -1
- **D** -2

5 The table contains information about sodium and sodium chloride

| Properties | Na | NaCl |
|-------------------------------|------|------|
| Melting point (°C) | 98 | 801 |
| Density (gcm ³⁻¹) | 0.97 | 2.16 |

When molten sodium is chloride is electrolysed at 850°C the sodium appears as:

- A a liquid on the top of molten sodium chloride
- **B** a liquid layer at the bottom of the molten sodium chloride
- **C** a solid on the surface of the sodium chloride
- **D** a solid layer beneath the molten sodium chloride

| 6 | xAl(s) + | $uBr_2(I)$ | \longrightarrow | ZAIBra(s) |
|---|----------------------------|------------|-------------------|------------|
| • | \mathcal{A} AI(3) \top | 9012(1) | | ZAIDI 3(3) |

The equation will be balanced when:

- **A** x = 1, y = 2, z = 1
- **B** x = 2, y = 3, z = 2
- **C** x = 3, y = 2, z = 3
- **D** x = 4, y = 3, z = 4
- 7 0.2 mol of a gas has a mass of 12.8g.Which of the following could be the molecular formula for the gas?
- A SO₂
- **B** CO
- \mathbf{C} CO_2
- D NH₃
- Which of the following oxides, when shaken with water, would leave the pH unchanged? You may wish to use the data book to help you.
- **A** carbon dioxide
- **B** copper oxide
- **C** sodium oxide
- **D** sulphur dioxide
- **9** Which compound would not neutralise hydrochloric acid
- A sodium hydroxide
- **B** sodium chloride
- **C** sodium carbonate
- **D** sodium

The name of the above compound is:

- A 2,3-dimethylpropane
- **B** 3,4-dimethylpropane
- **C** 2,3-dimethylpentane
- **D** 3,4-dimethylpentane
- The shortened structural formula of an organic compound is: $CH_3CH(CH_3)CH(OH)C(CH_3)_3$

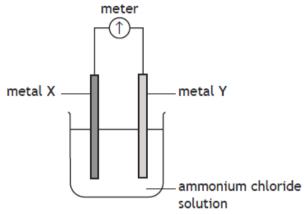
Which of the following is another way of representing this structure?

12 Three members of the cycloalkane homologous series are:

Which of the following is the general formula for this series?

- A C_nH_{2n-4}
- $B C_n H_{2n+2}$
- \mathbf{C} C_nH2_n
- $D C_n H_{2n-2}$

- **13** Metallic bonding is a force of attraction between:
- A negative ions and positive ions
- **B** a shared pair of electrons and two nuclei
- **C** positive ions and delocalised electrons
- **D** negative ions and delocalised electrons
- 14 Which pair of metals when connected in an electrochemical cell would give the highest voltage and a flow of electrons from X to Y

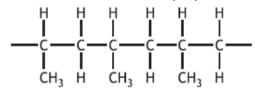


Metal X Metal Y

AtinzincBzinctin

C copper magnesiumD magnesium copper

15 Part of the structure of a polymer is shown below.



The monomer that could be used to make this polymer is:

