

END OF YEAR EXAMS 2018

S.2 CHEMISTRY

TIME: 1:30MINS

SECTION.A

1. The substance that will not sublime when heated is
 - a. Sulphur
 - b. Iron (iii) chloride
 - c. ammonium chloride
 - d. iodine
2. Which one of the following is an alloy of copper and Zinc.
 - a. Brass
 - b. Steel
 - c. solder
 - d. bronze
3. Which one of the gases is obtained by fractional distillation?
 - a. Oxygen
 - b. Sulphur dioxide
 - c. ammonia
 - d. hydrogen
4. The best method for separating a mixture of ammonium chloride and sodium chloride is
 - a. Decantation
 - b. Distillation
 - c. filtration
 - d. sublimation
5. Which one of the following describes the solid obtained after filtration?
 - a. Filtrate
 - b. Sublimate
 - c. residue
 - d. distillate
6. Which one of the following electronic configuration is of a noble gas?
 - a. 2:8:1
 - b. 2:8:2
 - c. 2:8:8
 - d. 2:8:7
7. Which one of the following substances is used to test for the presence of oxygen?
 - a. A glowing splint
 - b. A burning splint
 - c. Litmus paper
 - d. Anhydrous copper (ii) sulphate
8. The electronic configurations of elements L, M, V and R are 2:8:3, 2:8:6, 2:8: and 2:8:8:2 respectively. Which one of the following pairs of elements consists of metals only?
 - a. M and V
 - b. M and R
 - c. L and V
 - d. L and R
9. Which one of the following metals will react most readily with cold water?
 - a. Sodium
 - b. calcium

potassium

10. Which one of the following oxides is amphoteric?

- a. Lead (II) oxide B. iron (II) oxide
b. Copper (II) oxide D. copper (I) oxide

11. The substance formed when iron rusts is

- A. Hydrated iron (II)
B. Anhydrous iron (II) oxide
C. Hydrated iron (III) oxide
D. Anhydrous (III) oxide

12. Sodium burns in excess supply of air(oxygen) forming

- a. Sodium peroxide c. sodium hydroxide
b. Sodium oxide d. sodium carbonate

13. Which one of the following ions if present in water causes hardness?

- a. Na^+ b. Al^{3+} c. Mg^{2+} d. NH_4

14. The atomic number of an element R is 13. The electronic configuration of the ion of R is

- a. 2:8:8 b. 2:8:5 c. 2:8:3 d. 2:8

15. A compound has the formula $M_2(PO_4)_3$. To which group of the periodic table the element M belongs?

- a. II b. III c. IV d. V

16. The following acids are completely ionized in water except.

- Hydrochloric acid
- Sulphuric acid
- Nitric acid
- Carbonic acid

17. Which one of the following salts is soluble in water?

- Lead chloride
- Sodium carbonate
- Calcium sulphate
- Barium carbonate

18. Most metals react with dilute mineral acids to form.

- The salt of the metal and hydrogen gas
- The salt of the metal only
- The salt of the metal and water

- d. Hydrogen gas only.
19. Which of the following compounds is formed by sharing electrons?
- a. Sodium chloride
 - b. Magnesium chloride
 - c. Calcium oxide
 - d. Hydrogen chloride gas.
20. The formula of the compound formed between elements Q and L with atomic numbers 12 and 15 respectively is?
- a. Q_2L_3 b. QL_3 B. Q_2L_5 D. Q_3L_2

SECTION.B

21. a) Hydrogen can be prepared by reacting dilute hydrochloric acid with metal D.

(i) Name metal D.

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(ii) State the conditions for the reaction.

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(iii) Write equation for the reaction that took place

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b) Hydrogen was reacted with lead (II) oxide

(i) state the conditions for the reaction

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(ii) state what was observed.

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(iv) Write equation for the reaction between hydrogen and lead (II) oxide

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22. Write the chemical formulae of the compounds.

(i) Calcium phosphate

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(ii) Magnesium hydroxide

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(iii) Potassium nitrate

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(iv) Ammonium phosphate

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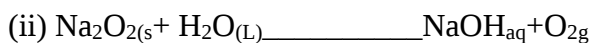
(v) Copper (II) carbonate

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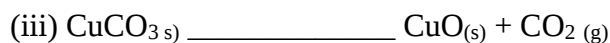
b) Balance the following equations



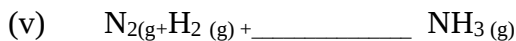
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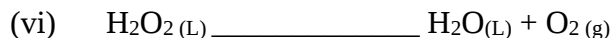
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23. a) Define the following terms and give one example of each

(i) normal salt

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Example

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(ii) acid salt

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Example

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b) Sulphuric acid is a strong dibasic acid.

What is meant by the term?

(i) Strong acid

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(ii) Basicity of an acid

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c) Describe briefly how magnesium sulphate can be prepared in the laboratory using magnesium oxide and dilute sulphuric acid

24. The Number of electrons, protons and neutrons in atoms A, B, C and D are shown in the table below. The letters are not the usual symbols for elements.

atom	electrons	protons	Neutrons
A	8	8	8
B	6	6	6
C	13	13	14
D	X	6	7

a) Determine

(i) The value of X

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(ii) Approximate relative atomic mass of C

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b) Write the electronic configurations of the following atoms and ions.

(i) A

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(ii) A^{2-}

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(iii) C

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(iv) C^{3+}

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(c) (i) Which atoms are isotopes?

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(iii) Give a reason for your answer

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c) Write the formula of the compound formed between A and C and state the type of bond formed in the compound

(i) Formula

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(ii) Type of bond

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MERRY XMAS AND A HAPPY NEW YEAR **END**