CHEMISTRY

BOOKS - V PUBLICATION

MODEL QUESTION PAPER AND ANSWERS

Question Bank

1. Atomic number means the number of ..... in an atom

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2. Which allotrope of carbon is used as an solid lubricant?

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3. Which among the following substances is used for bleaching?

A. Oxygen

B. Hydrogen

C. Chlorine

D. Nitrogen

Answer: C

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4. Name the catalyst which reduces the decomposition of hydrogen peroxide?

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5. Carbon atoms have the ability to combine with each other. By what name this ability is called?

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6. A neutralisation reaction is given

$$NaOH + HCl \rightarrow NaCl + H_2O$$

a) Which among the above substances has lowest pH?

b) What is the pH of NaCl solution?

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7. A few facts regarding a gas is given.

i) It is a poisonous gas

ii) It is formed by the incomplete burning of fuels.

a) Which is the gas?

b) What is the name of mixture of this gas and nitrogen?

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8. Reaction between metal and dilute acids are examples of displacement reactions.

a) What is displacement reaction?

b) Write one example.

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9. When sodium and chlorine take part in bond formation, they attain octet configuration by electron transfer (Atomic

number: Na- 11, Cl-17) . Represent the electron dot diagram of the above bond formation.

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10. From the given statements, select those suitbale for graphite.

i) Is a conductor of electricity

ii) Is very hard

iii) Is non-volatile

iv) Has high thermal conductivity

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11. Hydrogen is an important fuel for future.

a) What are the chemicals used to prepare hydrogen in the laboratory?

b) Write any one advantages of hydrogen as fuel.

c) Which chemical compound is known as heavy water.

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12. Electronic configutation of elements P, Q and R are given.

P= 2,1

Q = 2,8,2

R= 2,8,6

a) Which of the above elements belong to the same period?

b) Which among the elements has the highest electronegativity?

c) Write down the chemical formula of the compound formed by P and R?

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13. The electronic configuration of some elements are given. (Symbols are not real). Analyse them and answer the following questions.

B=2,8,7

C=2,8,1

D= 2,8,3

a) Which of the following show the valency '1'?

b) To which group does the elements 'D' belong? c) Which element among these has the lowest ionisation energy? Why?

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14. Take 5mL of hydrogen peroxide (H_2O_2) solution in a test tube. Add some magnesium dioxide (MnO_2) in to it.

a) What is the gas evolved?

b) What is the function of MnO_2in this reaction?

c) Which are the substances remaining in the test tube when the reaction is over?

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15. The equation of a neutralisation reaction is given below:

$Ca(OH)_2 + H_2SO_4 \rightarrow CaSO_4 + 2H_2O$

a) Identify the alkali in this reaction.

b) Write down the chemical equation of the reaction between $Mg(OH)_2$ and HCl.

c) Which is the product formed when the common components of an acid combines with the common component of an alkali?

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16. Three atoms are given:

$_{11}Na, {}_{15}P, {}_{17}Cl$

a) Which among these is the most electronegative atom.

b) Which atom has the lowest ionization energy?

Which are the factors on which ionisation energy depends?

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17. The colour of wet flower petals is found to fade when they are dropped in a jar filled with chlorine.

a) Give the name of this process?

b) Choose the chemicals from the bracket which are needed to prepare chlorine in the laboratory.

($Zn, KMnO_4, Con.\ HCl, Con.\ HNO_3$)

c) Name the substance through which the gas is passed to remove the traces of water vapour formed along the chlorine.

d) Name a compound of chlorine used in the purification of water.

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18. pH values of certain substances are given.

A=1, B=6, C=7, D=9, E=14

a) Which of these is the strongest alkali?

b) One among these potassium chloride solution. Identify.

c) Give any two properties of compounds belonging to the category of 'A'.

d) Name a substance commonly added to soil when the pH of the soil decreases.

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19. Classify the given chemical reactions into combination,displacement,decomposition and double dispacement reaction.

$Mg + 2HCl \rightarrow MgCl_2 + H_2$

$Zn + CuSO_4 \rightarrow ZnSO_4 + Cu$

$H_2 + S \rightarrow H_2S$

$H_2SO_4 + BaCl_2 \rightarrow 2HCl + BaSO_4$

$2Na + H_2 \rightarrow 2NaH$

$2NaCL \rightarrow 2Na + Cl_2$

$2H_2O_2 \rightarrow 2H_2O + O_2$

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20.

$Zn^0 + Cu^{2+}(SO_4)_2^{2-} \rightarrow Zn^{2+}(SO_4)_2^{2-} + Cu^0$

Analyse the the given equation and answer the following questions:

a) Which element gets oxidised?

b) Which ion gets reduced?

c) Which is the oxidising agent?

d) Which is reducing agent?

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