



قائمة الاسئلة

كيمياء عامة عضوية - المستوى الأول - طب أسنان

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- 1) One of nucleus particles that has no charge called
 - 1) - A) proton
 - 2) B) neutron
 - 3) - C) electron
 - 4) - D) positron
- 2) As we go from up to down in the group , the ionization energy
 - 1) - A) increase
 - 2) B) decrease
 - 3) - C) no change
 - 4) - D) remains same
- 3) The ionic radius of Cl⁻ is that of Cl atom
 - 1) A) greater than
 - 2) - B) smaller than
 - 3) - C) same as
 - 4) - D) equal to
- 4) Unsaturated aliphatic hydrocarbon containing carbon carbon double bond called
 - 1) - A) alkane
 - 2) - B) cycloalkane
 - 3) - C) alkynes
 - 4) D) cycloalkene
- 5) Boiling point of ethanal is more than that of ethane because of ethanal
 - 1) A) polarity
 - 2) - B) ability of forming hydrogen bond
 - 3) - C) the answer is A and B
 - 4) - D) the answer is neither A nor B
- 6) reaction of 1-methylcyclohexene with water in the presence of H₂SO₄ gives
 - 1) A) 1-methylcyclohexanol
 - 2) - B) 2-methylcyclohexanol
 - 3) - C) 1-methylcyclohexane
 - 4) - D) 1-methylcyclohexenol
- 7) The hybridization and bond angle in alkane is
 - 1) - A) Sp² , 109.5°
 - 2) - B) Sp , 109.5°
 - 3) - C) Sp³ , 120°
 - 4) D) Sp³ , 109.5°
- 8) The geometrical shape of alkenes is
 - 1) - A) tetrahedral
 - 2) - B) octahedral
 - 3) C) trigonal planar
 - 4) - D) linear
- 9) Reaction of 3-methyl-1-butene with HBr gives
 - 1) A) 2-bromo-3-methylbutane
 - 2) - B) 1-bromo-3-methylbutane
 - 3) - C) 3-bromo-3-methylbutane
 - 4) - D) 2-bromo-3-methylbutene





- 10) A physical or chemical property that depends on substance quantity called
- 1) A) extensive
 - 2) B) intensive
 - 3) C) The answer is A and B
 - 4) D) none of previous
- 11) The smallest unit of an element that retains a substance chemical properties called
- 1) A) compound
 - 2) B) ion
 - 3) C) molecules
 - 4) D) atom
- 12) potassium iodide is changed into metallic potassium and iodine gas , this process represent a
- 1) A) physical change
 - 2) B) phase change
 - 3) C) chemical change
 - 4) D) nuclear change
- 13) alkenes can be prepared from
- 1) A) elimination of water from alcohol using heat and sulfuric acid
 - 2) B) elimination of HX from alkyl halide using heat and strong base
 - 3) C) addition of hydrogen to carbonyl compounds
 - 4) D) the answer is A and B
- 14) General formula of acyclic alkyne is
- 1) A) C_nH_{2n+2}
 - 2) B) C_nH_{2n-2}
 - 3) C) C_nH_{2n-4}
 - 4) D) C_nH_{2n-6}
- 15) when orbital overlapping is head to head , the bond resulting is
- 1) A) σ bond
 - 2) B) π bond
 - 3) C) ionic bond
 - 4) D) metallic bond
- 16) A part of nomenclature that indicates the type of functional group called
- 1) A) root
 - 2) B) suffix
 - 3) C) prefix
 - 4) D) the answer is A, B and C
- 17) Grignard reagent should be prepared in dry ether , but not in water because
- 1) A) it's insoluble in water
 - 2) B) it reacts with water
 - 3) C) The answer is A and B
 - 4) D) the answer is neither A nor B
- 18) 2-methyl-1-butene is classified as
- 1) A) internal alkene
 - 2) B) terminal alkene
 - 3) C) cyclic alkene
 - 4) D) acyclic alkane
- 19) Which of the following properties of Ca metal is not a chemical property?
- 1) A) Ca tends to give up two electron to form ionic compounds.
 - 2) B) Ca has a high electrical conductivity.
 - 3) C) Ca, when dropped into water, causes the evolution of H₂ gas





- 4) - D) Ca reacts violently with oxygen.
- 20) If a sample of matter is uniform throughout and can be separated into other substances by physical means, it is
- 1) - A) an element
 - 2) - B) either a compound or an element
 - 3) C) a homogeneous mixture
 - 4) - A) compound
- 21) How many moles of oxygen are consumed by the complete combustion of 44g of propane, C_3H_8 ?
- 1) - A) 7
 - 2) - B) 220
 - 3) C) 5
 - 4) - A) 3
- 22) Which of the following is the most characteristic reaction of alkenes?
- 1) - A) substitution
 - 2) B) addition
 - 3) - C) elimination
 - 4) - A) displacement
- 23) How many significant figures should the final answer contain for the following calculation? $(9.284 + 2.6) \times 5.31421 =$
- 1) - A) 1
 - 2) - B) 2
 - 3) C) 3
 - 4) - A) 4
- 24) You have started to work in a synthesis lab, and you have made a new substance with a molar mass of $265.18 \text{ g mol}^{-1}$. You make 26.3 grams of this substance. How many moles of this substance have you made?
- 1) - A) 6.65
 - 2) B) 0.0992
 - 3) - C) 0.287
 - 4) - D) 6,974.23
- 25) Ether has a density of 713 mg/ml. What is the mass (in g) of a 1.5 mL sample of ether based on this data?
- 1) A) 1.07
 - 2) - B) 1.55
 - 3) - C) 3.55
 - 4) - D) 6.02
- 26) Which of the following statements about periodic properties is incorrect?
- 1) - A) Both electron affinity and ionization energy decrease down a group.
 - 2) - B) Electron affinity increases to the right across a period.
 - 3) C) Atomic size increases to the right across a period.
 - 4) - D) Atomic size increases down a group.
- 27) A compound with a composition of 87.5 % N and 12.5 % H was recently discovered. What is the empirical formula for this compound?
- 1) A) NH_2
 - 2) - B) N_2H_3
 - 3) - C) NH
 - 4) - D) N_2H
- 28) This equation is unbalanced: $PCl_3 + H_2O \rightarrow H_3PO_3 + HCl$ When it is correctly balanced, the coefficients are, respectively
- 1) - A) 1,3,1,1
 - 2) - B) 1,1,1,3





- 3) C) 1,3,1,3
4) D) 2,3,2,3
- 29) Given 6 mol of each reactant, which one would be limiting in the following reaction? $4\text{Au} + 8\text{NaCN} + \text{O}_2 + 2\text{H}_2\text{O} \rightarrow 4\text{NaAu}(\text{CN})_2 + 4\text{NaOH}$
- 1) A) Au
2) B) O_2
3) C) H_2O
4) D) NaCN
- 30) Which of the following combinations of names and formulas is incorrect?
- 1) A) H_3PO_4 phosphoric acid
2) B) HNO_3 nitric acid
3) C) NaHCO_3 sodium carbonate
4) D) KOH potassium hydroxide
- 31) What is the name of $\text{Ti}_3(\text{PO}_4)_4$?
- 1) A) Titanium phosphate
2) B) Titanium (III) phosphate
3) C) Titanium (IV) phosphate
4) D) Titanium tetraphosphate
- 32) What is the formula of hydroiodic acid?
- 1) A) HI
2) B) HIO
3) C) HIO_2
4) D) HIO_3
- 33) In all neutral atoms, there are equal numbers of
- 1) A) Protons and neutrons
2) B) Positrons and electrons
3) C) Neutrons and electrons
4) D) Electrons and protons
- 34) Which statement is true?
- 1) A) The nucleus of an atom contains neutrons and electrons.
2) B) The atomic number of an element is the number of protons in atom.
3) C) The mass number of an atom is the number of protons in the nucleus plus the number of electrons outside.
4) D) The number of electrons outside the nucleus is the same as the number of neutrons in the nucleus.
- 35) A sodium ion differs from a sodium atom in that the
- 1) A) sodium ion has fewer electrons.
2) B) sodium ion is an isotope of sodium.
3) C) sodium ion exists only in solution.
4) D) sodium ion has a negative charge on its nucleus.
- 36) What happens when a bromine atom becomes a bromide ion?
- 1) A) A positive ion is formed.
2) B) The bromine nucleus acquires a positive charge.
3) C) The atomic number of bromine is decreased by one.
4) D) The bromide ion is then larger than the bromine atom.
- 37) Which equation corresponds to the electron affinity of chlorine?
- 1) A) $\text{Cl}^- (\text{g}) \rightarrow \text{Cl} (\text{g}) + \text{e}^-$
2) B) $\text{Cl}_2 (\text{g}) + \text{e}^- \rightarrow \text{Cl}_2^- (\text{g})$
3) C) $\text{Cl} (\text{g}) \rightarrow \text{Cl}^+ (\text{g}) + \text{e}^-$





- 4) D) $\text{Cl (g)} + \text{e}^- \rightarrow \text{Cl}^- \text{ (g)}$
- 38) A 3.41×10^{-6} g sample is known to contain 4.67×10^{16} molecules. What is this compound?
- 1) A) CH_4
- 2) B) CO_2
- 3) C) H_2O
- 4) D) NH_3
- 39) Choose the pure substance from the list below.
- 1) A) Sugar
- 2) B) Air
- 3) C) drinking water
- 4) D) Sea water
- 40) The $500 \mu\text{m}$ is equal to
- 1) A) $500 \times 10^{-6} \text{ m}$
- 2) B) $5 \times 10^{-4} \text{ m}$
- 3) C) $500 \times 10^{+3} \text{ nm}$
- 4) D) The answer is A , B and C

