

عدد الصفحات (٩ صفحات) + الغلاف
الخارجي + ٤ صفحات مسودة وفقد أية ورقة
من الكراسة يعتبر مسئولية الطالب.

رقم المادة : ٦٠٠٦ / ٥/ E

دمج / ش

جمهورية مصر العربية

وزارة التربية والتعليم والتعليم الفني

امتحان شهادة إتمام الدراسة الثانوية العامة لطلاب الدمج التعليمي

المادة : الكيمياء بالإنجليزية (دمج شلل)

(الإجابة في نفس كراسة الأسئلة) الدور الثاني ٢٠٢٢ م زمن الإجابة : ثلاث ساعات

توقيع		الدرجة	السؤال
مراجع السؤال	مفرد السؤال		
			١
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			١٠
			المجموع

مجموع الدرجات

رقم المراقبة

مجموع الدرجات بالحروف :

امضاءات المراجعين :

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(الإجابة في نفس كراسة الأسئلة)

رقم المراقبة

اسم الطالب رباعيا /

المدرسة /

رقم الجلوس /

الإدارة /

المحافظة /

التوقيع

الإسم

-١

-٢

توقيع الملاحظين بصحة البيانات
ومطابقة عدد أوراق كراسة الإجابة
عند استلامها من الطالب

٢٠٢٢

غير مصرح للطلاب بالكتابة في هذه الصفحة

٢٠٢٢

غير مصرح للطلاب بالكتابة في هذه الصفحة

٢٠٢٢

Answer the Following Questions :**Group 1: Questions from (1 – 9)**

1) Choose to answer (a) or (b). Write down the suitable scientific concept that is expressed as:

(a) The system which is apparently stationary on the visible level, but in reality it is dynamic.

- The equilibrium system
- Chemical equilibrium
- Chemical system
- rate of reaction

(b) The process in which unionized molecules are changed into ions.

(Binding energy – Ionization – Oxidation – Fusion)

2) Choose to answer (a) or (b). Choose the correct answer:

(a) The number of triple bonds in ethyne gas (C_2H_2) is

(8 – 4 – 2 – 1)

(b) The general formula of alkenes is

(C_nH_n – C_nH_{2n-2} – C_nH_{2n} – C_nH_{2n+2})

3) Choose to answer (a) or (b). Choose the scientific concept

(a) The element in which (d) or (f) sublevel is partially filled by electrons either in the atomic state or in one of its oxidation states.

(Inert element – Transition element – Active element – Radioactive element)

(b) An alloy in which a metal whose atoms are smaller in size than those of the pure metal is introduced in the intermolecular spaces of the crystal lattice of the pure metal.

(Interstitial alloy - Substitutional alloy - Inter-metallic alloy - Gold alloy)

(بقية الأسئلة في الصفحة الثانية)

4) Choose the correct answer: Paramagnetic property found in elements and ions which

- have got unpaired electrons
- have not got unpaired electrons
- aren't attract to magnetic field
- are coloured

5) Choose the suitable scientific concept:

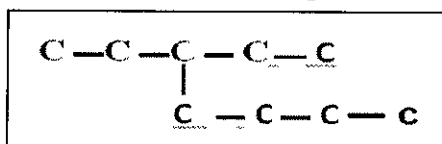
The reactions which proceed in one direction which is usually forward direction

- Complete reactions
- Reversible reactions
- Instantaneous reactions
- Precipitation reactions

6) Choose the correct answer:

The number of carbon atoms in longest chain in the given shape is

(5 - 6 - 7 - 8)



7) Choose the correct answer:

On adding dilute hydrochloric acid (HCl) to sodium carbonate solution (Na_2CO_3), gas is evolved.

(CO_2 - H_2 - HCl - CO)

8) Choose the correct reason to answer the next: Give reason for: Water gas ($\text{CO} + \text{H}_2$) is used in Midrex furnace .

- 1- Because water gas is a reducing agent which reduces CO to C .
- 2- Because water gas is an oxidizing agent which oxides iron ores to Fe .
- 3- Because water gas is a catalyst that accelerates the reaction to obtain iron.
- 4 - Because water gas is a reducing agent which reduces iron ores to Fe .

9) Choose the correct answer: If the standard oxidation potential for zinc and nickel are (+ 0.76 v , +0.23 v) So the emf of this cell equals

(0.76 V - 0.99 V - 0.23 V - 0.53 V)

(بقية الأسئلة في الصفحة الثالثة)

Group 2 : Questions from (10 – 18)

10) Choose to answer (a) or (b). Choose the correct answer:

(a) The German scientist who prepared urea in the laboratory....

(Brezelius – Markownikoff – Wohler – Baeyer)

(b) The types of bonds in organic compounds molecules are

(Ionic bonds – Metallic bonds – Covalent bonds – Coordinate bonds)

11) Choose the suitable scientific concept: The chemical analysis which aims to estimate the percentage of each essential components of substance is

.....

- Quantitative analysis - Volumetric analysis

- Qualitative analysis - Electrolysis

12) Choose the suitable scientific concept: It is a phenomenon that many organic compounds are different in the physical and chemical properties and also in structural formula, but they have the the same molecular formula.

(Passivity – Isomerism – Molecular formula – Structural formula)

13) Choose the correct answer for the next reason:

Benzene reacts by two kinds of reactions (addition and substitution) .

a- Because it is not an active compound.

b- Because it contains single bonds only.

c- Because it contains double bonds only.

d- Because it contains both single and double bonds.

14) Choose the suitable scientific concept:

It is a combination of a large number of simple compound molecules (their numbers ranging from one hundred to million) to form a huge molecules which has a big molecular mass.

(Electrolysis – Isomerism – Polymerization – Oxidation)

15) Choose the correct answer: It is a chemical decomposition of an electrolyte by passing an electric current through it .

(Chemical analysis – Electrolysis – Ionization – Oxidation)

(بقية الأسئلة في الصفحة الرابعة)

16) Choose to answer (a) or (b). Choose the correct answer:

(a) The molecule of detergent is composed of head and Tail .

- hydrophilic/ hydrophobic
- hydrophobic / hydrophilic
- positive / positive
- long / long

(b) The scientist who established the vital force theory is
(Brezelius - Markownikoff - Wohler - Baeyer)

17) Choose the correct answer: A solution is of pH = 3 so its pOH =
(3 - 9 - 10 - 11)

18) Choose the suitable scientific concept: A transition element used in artificial joints for human.

(Copper Cu - Vanadium V - Titanium Ti - Manganese Mn)

Group 3 : Questions from (19 - 27)

19) Choose to answer (a) or (b). Choose the correct answer:

(a) Detection of unsaturation in both of ethyne and ethene

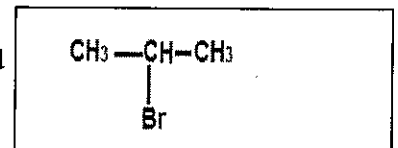
- Hydrogen peroxide
- Bromine dissolved in CCl₄
- Acidified potassium dichromate
- Rod of iron

(b) The number of single bonds in C₂H₂ is

(1 - 2 - 4 - 8)

20) Choose to answer (a) or (b). Choose the correct answer:

(a) The scientific name of the compound in front of you
According to IUPAC is



- 2 bromopropane
- Bromopropene
- Methyl bromoethane
- Propane bromide

(b) The scientific name of the compound in front of you

according to IUPAC is C H₂ = CH₂ - C H₂ - CH₃

- 2-Butene
- 1 - butene
- Butane
- 1 - propane

21) Choose to answer (a) or (b). Choose the correct answer for the next reason:

(a) Nickel is used in metal plating

- Because it is hard
- To protect them from oxidation or corrosion
- To give metals red color
- Because it is cheap

(b) Iron from transition elements.

- Because it is a heavy metal
- Because it ends with partially filled (d) sublevel
- Because it has large atomic number
- Because it has completely filled (s) sublevel).

22) Choose the correct answer: In Extraction of aluminum by electrolysis fluorspar (CaF_2) is used

- As an oxidizing agent
- To decrease the melting point
- To increase the melting point
- As a reducing agent

23) Choose the correct answer: The scientific who established the relation between the rate of the chemical reaction and the concentration of reactants is

(Hiesenbeg - Le Chatelier - Guldberg and Waage - Schrodinger)

24) Choose the correct answer: Ionic equilibrium is a type of equilibrium that occurs in solutions.

(Strong electrolytes - Acids - Weak electrolyte - Bases)

25) Choose the correct answer: Teflon is used in

(Surgical thread - Drainage tubes - Insulators floors - Antifreezing substance)

26) Choose the correct answer: The electrolyte in lead accumulator is

.....

- Spongy lead
- Lead dioxide
- Diluted sulphuric acid
- Potassium hydroxide solution

(بقية الأسئلة في الصفحة السادسة)

27) Choose the suitable scientific concept: It is the product of multiplication of the concentration of hydrogen ion and hydroxyl ion that produced from ionization of water, which is equal 10^{-14} .

- Ionic product of water K_w - pH value
- Concentration of product - Concentration of reactants

Group 4 : Questions from (28 – 36)

28) Choose to answer (a) or (b). Choose the correct answer for the next reason:

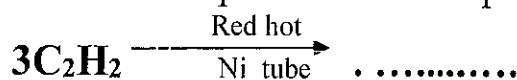
(a) Lithium battery is preferred than Lead acidic battery.

- 1- Because it is heavier and stores more amount of energy.
- 2- Because it is heavier and stores less amount of energy.
- 3- Because it is lighter and stores more amount of energy.
- 4- Because it is lighter and stores less amount of energy.

(b) Fuel cells are important in space ships.

- 1- Because it doesn't store the produced energy.
- 2- Because the gaseous fuel is the same fuel of launching rockets .
- 3- Because it has light weight and rechargeable.
- 4- Because it has low coast and produces high amount of energy .

29) Choose the correct answer to complete the next equation :



(Benzene and hydrogen – Acetylene - Cyclo hexane – Benzene only)

30) Choose the suitable scientific concept:

The change of concentration of the reactants per unit time.

- Strength of chemical reaction - Rate of chemical reaction
- Concentration of chemical reaction - Product of chemical reaction

31) Choose the correct answer:

On adding concentrated nitric acid to iron, is formed .

- Iron (II) nitrate and hydrogen
- Iron (III) nitrate, water and nitric oxide
- Iron (III) nitrate and water .
- A thin layer of oxide stop the reaction .

32) Choose the correct answer:

Magnetic iron oxide react with concentrated sulphuric acid and give

.....

- Iron (II) salts
- Iron (III)salts
- Iron (II) salts and Iron (III)salts
- Iron hydroxide

33) Choose the suitable scientific concept:

It is the process of treating the fine particles of iron ore to collect them into a larger size to be similar and homogeneous.

(Reduction – Oxidation - Sintering – Roasting)

34) Choose to answer (a) or (b). Choose the correct answer:

(a) Standard electrode whose potential equals zero is electrode.

(Oxygen – Hydrogen – Copper – Zinc)

(b) Magnesium metal is more active than iron, and when ships chassis connected to magnesium metal to protect it from corrosion, the magnesium metal is considered as

(Scarifying electrode - Negative pole - Earth pole - North pole)

35) Choose the correct answer: Dissolving sodium chloride salt in water produce

- Acidic solution
- Basic solution
- Neutral solution
- Solution changes litmus paper into red

36) A sample of hydrated iron (III) chloride of mass 1.3525 g was heated strongly till it reached constant mass of 0.8125 g, So the mass of water in the sample equals.....

(2.165g - 1.3525 g - 0.8125 g - 0.54 g)

Group 5 : Questions from (37 – 45)

37) Choose to answer (a) or (b). Choose the correct answer:

(a) On adding silver nitrate solution to sodium sulphide solution

..... precipitate is formed.

(White – Yellow – Black – White change into black by heating)

(b) Barium chloride is used to distinguish between

..... and salts.

- Sulphate and phosphate

- chloride and bicarbonate

- Nitrate and nitrite

- Sodium and potassium

38) Choose the correct answer:

In Daniel cell. reduction occurs in

(Zinc - Copper - Zinc ions - Copper ions)

39) Choose the correct answer: On adding dilute hydrochloric acid to

..... Salt, a pungent smell gas evolved which turns a paper wetted with acidified potassium dichromate to green.

(Carbonate – Phosphate – Sulphide –sulphite)

40) Rearrange the next compounds in an assending order according to its activity: (from low to high activity)

(Alkenes – Alkanes – Alkynes)

1 -

2 -

3-

(بقية الأسئلة في الصفحة التاسعة)

41) Choose the correct answer: Enzymes act as
for many biological and industrial processes.

(Drying agents – Catalyst – Oxidizing agents – As disinfectants)

42) Choose the correct answer for the next reason:

Diluted hydrochloric acid doesn't react with sodium sulphate

.....

1- Because its stability is more than sulphuric acid.

2- Because its stability is less than sulphuric acid.

3- Because it needs heat to start the reaction.

4- Because its stability equals sulphuric acid stability.

43) Choose to answer (a) or (b). Choose the correct answer:

(a) Number of hydrogen atoms in alkanes which contains 5 carbon atoms is

equal to (5 – 10 – 12 – 14)

(b) Gamixane is used as

(Insecticide – Drainage tubes – Insulators floors – Antifreezing substance)

44) Calculate the equivalent mass of a metal if 0.173g of the metal deposited
when an electric current of 1 ampere is passed for 15 minutes.

(155.7 - 9.27 - 18.55 - 0.0016)

45) Providing that the solubility degree of silver chloride AgCl is 10^{-5} mol/L,
calculate the value of solubility product will be

($10 - 10^{-15} - 10^{-10} - 10^{-5}$)

(انتهت الأسئلة)

*** ÖZGÜN ***

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