Assiut University **June: 2022**

Faculty of Science **Time: 2 hrs.**

Chemistry Department **Total Degree: (50+10)**

Second Semester Final Examination

Subject: General Chemistry I (C-100)

Students: First Level "Credit Hours System"

Part (I) (25 marks)

Q1: Put (√) for true sentences or (X) for false sentences: (one mark for each)

1- The bond angle in NH_3 molecule is smaller than that in CH_4 ( )

2- The hybridization of **C** in CH_4 molecule is sp^3 ( )

3- The geometrical shape of ClF_3 molecule is trigonal planar ( )

4- The number of orbitals in a given subshell = $2\ell + 1$ ( )

5- The number of available electrons (A) in NO_3^- is 22 ( )

6- The hybrid orbitals for **S** in SH_6 is sp^3d ( )

7- In **VSEPR**, it is assumed that the geometry of a molecule depends only upon electron- electron interactions ( )

8- Core electrons responsible for both chemical and physical properties of atoms ( )

9- In an antibonding molecular orbital, the nuclei are attracted to the accumulation of electron density in the internuclear region. ( )

10- The emission spectrum consists of a series of dark lines superimposed on the continuous spectrum of the light source. ( )

Q2: Choose the correct answer a, b, c or d: (one mark for each)

1- The magnetic quantum number (m_ℓ) describes the orbital's .....

(a) size (b) shape (c) energy (d) orientation in space

2- The bond order in N_2 molecule is .....

(a) 1 (b) 2 (c) 3 (d) 4

3- The geometrical shape of SF_4 molecule is .....

(a) tetrahedral (b) trigonalbipyramidal (c) seesaw (d) square pyramidal

Please turn over for the rest of questions

4- The hybridization of **P** in PH_5 is .....

(a) sp^2 (b) sp^3 (c) sp^3d (d) sp^3d^2

5- The SO_3 molecule has ..... resonance structures.

(a) 0 (b) 2 (c) 3 (d) 4

6- The ..... molecule has a non-polar covalent bond.

(a) NaCl (b) Cl_2 (c) HF (d) HCl

7- The bond order in O_2^+ species is .....

(a) 1 (b) 1.5 (c) 2 (d) 2.5

8- For the third spectral emission line in Brackett series of H-atom: n_2 = ...

(a) 5 (b) 6 (c) 7 (d) 8

9- ..... stated that, an object can only gain or lose energy by absorbing or emitting radiant energy in QUANTA (hν).

(a) Bohr (b) Plank (c) de Broglie (d) Pauli

10- The total number of electron pairs on the **S** atom in the SF_4 molecule is

(a) 3 (b) 4 (c) 5 (d) 6

11- Which of the following is the correct set of quantum numbers for the outermost electron of silicon (**Si**) atom?

(a) n = 3, ℓ = 1, ml = +2, ms = -1/2 (b) n = 3, ℓ = 1, ml = -1, ms = +1/2

(c) n = 3, ℓ = 1, ml = -2, ms = +1/2 (d) n = 3, ℓ = 2, ml = +1, ms = -1/2

12- ..... suggested that particles of matter should show wave characteristics under certain circumstances.

(a) Bohr (b) de Broglie (c) Heizenberg (d) Sommerfeld

13- The electron domain geometry of NH_3 molecule is .....

(a) trigonal planar (b) tetrahedral (c) linear (d) octahedral

14- The geometrical shape of BrF_5 molecule is .....

(a) square pyramidal (b) trigonal bipyramidal (c) seesaw (d) octahedral

15- The number of nonbonding electron pairs on the **Cl** atom in ClF_3 molecule is .....

(a) 0 (b) 1 (c) 2 (d) 3

(Atomic numbers: H=1, C=6, N=7, O=8, F=9, Na=11, Si=14, P=15, S=16, Cl=17, Br=35)

Please turn over for the rest of questions

Part (II) (25 marks)

Q3: Answer FOUR ONLY of the following (4 x 3= 12 marks):

1. A gas with molecular formula $C_2F_4H_2$. If 2.5 g of this compound is introduced into evacuated 500 mL container at 10 °C. What pressure in atmospheres is developed?

2. A sample of liquid gas is placed in 3.00 mL flask and vaporized by heating to 95 °C at 1.02 atm, weights 5.87 g. Calculate the molar mass of this gas.

3. Predict whether the following reaction is feasible or not (give reason)

   $2Ag_{(s)} + Zn^{++}_{(aq)} = 2Ag^{+}_{(aq)} + Zn$ if (E^{o} (Ag^{+} / Ag = + 0.80V & Zn^{++} / Zn = + 0.76V)

Please turn over for the rest of questions

4. Sample of 150 mL of oxygen gas was collected over water at 25 °C at total pressure of 758 mm Hg. Calculate the number of moles of oxygen collected. (The partial pressure of water is 23 mm Hg)

5. An electrochemical cell based on the following reaction has a standard cell potential ($E^o = +0.48V$)

$$Sn_{(s)} + Cu^{++}_{(aq)} = Sn^{++}_{(aq)} + Cu_{(s)}$$

Calculate the standard potential of Sn (II) if (E^o (Cu^{++} / Cu= + 0.34V)

Q4: Put (√) for true sentences or (X) for false sentences: (one mark for each)

1. Molecules of different gases have the same average kinetic energy at the same temperature. ( )
2. The charges on colloidal particles are due to the absorption of its own ions from solution. ( )
3. The ideal gas equation can be expressed as either $PV = nRT$ or $PM = \rho RT$. ( )
4. Lyophilic colloids are less stable than lyophobic. ( )
5. The continuous rapid zig-zag motion of particles in colloidal solution is called electrophoresis ( )
6. At 25 °C, the vapour pressure of water is higher than that of ethanol. ( )

Please turn over for the rest of questions

7. Electro-osmosis is the motion of colloidal particles under the action of an electric field. ( )

8. Charles' Law stated that "At constant temperature, the volume of a fixed weight of gas is inversely proportional to its temperature'' ( )

9. Density of a liquid is the resistance of a fluid to flow. ( )

10. Redox process involves only one operation; oxidation or reduction. ( )

11. Calomel electrode isn't a reference electrode ( )

12. The molar gas volume for two moles of a gas at STP equals 22.4 L. ( )

13. Chemisorption is reversible whereas physisorption is irreversible. ( )

Oral Exam (10 marks)

Put (√) for true sentences or (X) for false sentences: (one mark for each)

1. Lewis structure fails to account for the magnetic properties of $\mathbf{O_2}$ molecule ( )

2. The bond length of $\mathbf{H_2^+}$ is shorter than that of $\mathbf{H_2}$ molecule ( )

3. The shape of **HCN** molecule is linear ( )

4. $\mathbf{C_2}$ molecule has paramagnetic properties ( )

5. A bonding molecular orbital has no nodal plane between the two atoms forming the bond ( )

6. An ideal gas cannot be converted into a liquid. ( )

7. Metals near the top of the electrochemical series are weak reducing agent. ( )

8. In the region above 31°C in Andrews isotherms, CO_2 always exist in gaseous state. ( )

9. Rate of effusion of oxygen is more than corresponding of nitrogen. ( )

10. The kinetic energy of gas is inversely proportional to its absolute temperature. ( )

(Atomic weights: carbon = 12; oxygen = 16; nitrogen = 14; fluorine =19)

Good Luck

(Examiners: Dr. Gamal Abdel-Wahab and Dr. Soliman Abdel-Fadeel)

Assiut University
Faculty of Science
Department of Chemistry

Date: 4 June 2022
Time allowed: 2 hours

Final Examination of General Chemistry (2) (C-105) for 1st level students

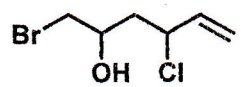
يتم طمس (تسويد) الإجابة المختارة من قبل الطالب باستخدام القلم الجاف فقط

Answer the following questions:

Section (A): Organic Chemistry

Q1. Shade the correct answer; A, B, C or D; (1 Mark each)

1. If two carbon atoms are bound by an overlap of sp hybrids, how many σ and π bonds result?
   A) 1 σ, 2 π B) 2 σ, 2 π C) 2 σ, 1 π D) 3 σ, 1 π
2. How many primary hydrogen and carbon atoms are there in 1,3-diethyl-2-methylcyclohexane.
   A) (15, 5) B) (10, 5) C) (9, 3) D) (12, 4)
3. The curved headed arrow is used to indicate:
   A) Heterolytic bond fission B) Homolytic bond fission
   C) Movement of two electrons to electron-poor center D) A and C
4. The IUPAC name for structure A is .....
   A) 6-bromo-2-chlorohex-1-en-5-ol
   B) 1-bromo-4-chloro-5-hexen-2-ol
   C) 6-bromo-2-chlorohex-2-en-5-ol
   D) 1-bromo-4-chloro-5-hexyn-2-ol



A

5. What is the characteristic interorbital angle between p-orbital and sp^2 orbitals?
   A) 109.5° B) 120° C) 90° D) 180°
6. Electrophilic addition reactions of alkenes .....
   A) Involve two exothermic steps
   B) Involve the formation of a carbocation intermediate
   C) Proceed at a rate determined by the first step
   D) B and C
7. Which carbon atom has the greatest % - P character?
   A) CH_4 B) C_2H_4 C) C_2H_2 D) A and C
8. $CH_4 + Cl_2 \xrightarrow{\text{Light}}$ .....major..... + ...minor.....
   A) $CH_3Cl + C_2H_4$ B) $CH_3Cl + C_3H_8$ C) $CH_3Cl + C_2H_6$ D) No reaction
9. The π bond may be formed by linear overlapping of two p orbitals:
   A) Each one is occupied by one electron
   B) One of them is occupied by two electrons and the other is empty
   C) A and B
   D) None of them
10. ..... electron-poor reagents in reactions with molecules and are neutral ions.
   A) Nucleophiles B) Carbanions C) Electrophiles D) Free radicals
11. Which one is the correct order of increasing C-H bond length?
   A) sp^3-H, sp^2-H, sp-H
   B) sp-H, sp^2-H, sp^3-H
   C) sp-H, sp^3-H, sp^2-H
   D) sp^2-H, sp^3-H, sp-H
12. Which one is the correct order for decreasing C-H bond strength?
   A) sp^3-H, sp^2-H, sp-H
   B) sp^2-H, sp^3-H, sp-H
   C) sp-H, sp^2-H, sp^3-H
   D) sp^3-H, sp-H, sp^2-H

Please turn over for the rest of questions

13. Which compound of the following would you expect to react by addition and substitution reaction

A) $CH_2=CH_2$ B) $CH_3-C\equiv CH$ C) $CH_3-C\equiv C-CH_3$ D) A and B

14. Reaction of 1,4-pentadiene with one mole of Br_2 gives .....

A) 4,5-Dibromo-3-pentene B) 1,2-Dibromo-3-pentene

C) 4,5-Dibromo-1-pentene D) 1,2-Dibromo-4-pentene

15. Ozonolysis of 2-methylpropene gives .....

A) Propanal only B) Ethanal and propanone

C) Propanal and methanal D) Propanone and methanal

16. Pentane and isohexane are examples for.....

A) Chain isomerism B) Positional isomerism C) Functional isomerism D) None of them

17. Reduction of 2-butyne using lindlar's catalyst gives .....

A) Butane B) 1-Butene C) 2-Butanol D) 2-Butene

18. The mechanism of the addition of one mole of HBr to 1,3-butadiene is .....

A) Nucleophilic addition B) Electrophilic addition C) Free radical addition D) Concerted

19. Addition of water to 2-butyne gives .....

A) Butanal B) 1-Butanol C) But-3-en-1-ol D) Butanone

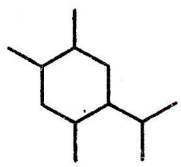
20. $CH_3C\equiv CH \xrightarrow[\text{ii) } CH_3CH_2I]{\text{i) } NaNH_2}$ .....

A) 3-Pentyne B) 2-Pentene C) 1-Pentyne D) 2-Pentyne

21. The general formula of alkynes and isolated dienes is .....

A) C_nH_{2n+2} B) C_nH_{2n-2} C) C_nH_{2n} D) None of them

22. The IUPAC name for structure A is .....



A

A) 1-Isopropyl-2,4,5-trimethylcyclohexane B) 1-Isopropyl-3,4,6-trimethylcyclohexane

C) 1,2,4-trimethyl-5-isopropylcyclohexane D) 1,2,5-trimethyl-4-isopropylcyclohexane

23. Which of the following correctly lists the conformations of cyclohexane in order of increasing energy?

A) chair < boat < twist-boat < half-chair

B) half-chair < boat < twist-boat < chair

C) chair < twist-boat < half-chair < boat

D) chair < twist-boat < boat < half-chair

24. How many structural isomers are possible for a compound has molecular formula C_4H_6?

A) 2 B) 3 C) 4 D) 5

25. How many isomers were obtained from monochlorination of methylcyclopentane?

A) 2 B) 4 C) 5 D) 6

Please turn over for the rest of questions

ion (B): Analytical Chemistry

Q2. Shade the correct answer; A, B, C or D; (1 Mark each)

26. In a reversible chemical reaction at equilibrium, if the concentration of any one of the reactants is doubled, then the equilibrium constant will .....
A) be doubled B) be halved C) remain the same D) become one-fourth

27. Which of the following aqueous solutions will have the highest pH?
A) NaCl B) CH_3COONH_4 C) Na_2CO_3 D) NH_4Cl

28. A certain buffer solution contains an equal concentration of X^- and HX. The K_a for HX is 10^{-8}. The pH of the buffer is:
A) 3.0 B) 8.0 C) 9.1 D) 11.0

29. K_{sp} of AgCl is 2.8×10^{-10} at 25°C. Its solubility in 0.1 *M* $AgNO_3$ will be:
A) 2.8×10^{-9} mole/liter B) 2.8×10^{-10} mole/liter
C) 3.2×10^{-9} mole/liter D) 3.2×10^{-12} mole/liter

30. The pH of a solution is 5.0. To this solution an acid was added so that its pH value becomes 2.0. The increase in H^+ concentration is:
A) 100 times B) 5 times C) 2.5 times D) 1000 times

31. If the concentration of the Ag^+ ions in a saturated solution of $Ag_2C_2O_4$ is 2.2×10^{-4} mole/liter, the K_{sp} of $Ag_2C_2O_4$ will be:
A) 2.66×10^{-12} B) 4.5×10^{-11} C) 5.3×10^{-12} D) none of these

32. Which of the following is a colligative property of a given solution?
A) relative lowering of viscosity B) boiling point depression
C) freezing point depression D) surface tension

33. The pH of 10^{-3} mole dm^{-3} of an aqueous solution of H_2SO_4 is:
A) 3.0 B) 2.7 C) 2.0 D) 3.7

34. Consider the reaction $2H_{2(g)} + O_{2(g)} \rightleftharpoons 2H_2O_{(g)}$. Which of the following correctly states the expression for the equilibrium constant (K_c) for this reaction?
A) $2[H_2O]/2[H_2][O_2]$ B) $2[H_2][O_2]/ 2[H_2O]$
C) $[H_2O]^2/[H_2]^2[O_2]$ D) $1/[H_2]^2[O_2]$

35. The equilibrium constants K_c for the reaction: $P_{4(g)} \rightleftharpoons 2P_{2(g)}$ is 1.4 at 400 °C. Suppose that 3 moles of $P_{4(g)}$ and 2 moles of $P_{2(g)}$ are mixed in a 2-liter container at 400 °C. What is the value of the reaction quotient (Q)?
A) 3/2 B) 2/3 C) 1.0 D) none of these

36. A solution of 0.45 g of urea (M. Wt. = 60 g/mole) in 22.5 g of water gave a boiling point equal: (K_b = 0.51 °C/mole)
A) 100.17 °C B) 99.83 °C C) 100 °C D) 99.73 °C

37. Which of the following solutions has the lowest pOH?
A) 0.2 *M* $HClO_4$ B) 0.2 *M* CH_3COOH ($K_a = 1.8 \times 10^{-5}$)
C) 0.02 *M* HCl D) 0.2 *M* $NaNO_3$

38. The equilibrium constant K_p for the reaction: $B_{(s)} + 3/2\ F_{2(g)} \rightleftharpoons BF_{3(g)}$ is 1.24 at 191 °C. What is the K_c for the same reaction at 191 °C (R = 0.082 L atm $mole^{-1}$ K^{-1})?
A) 6.70 B) 0.61 C) 8.30 D) 7.65

Please turn over for the rest of questions

39. In which of the following aqueous solutions the molar solubility of $Mg(OH)_2$ ($K_{sp} = 1.8 \times 10^{-11}$) will be the greatest ($K_b$ of $NH_4OH = 1.8 \times 10^{-5}$)?

A) 1.00 *M* NH_3 B) 1.00 *M* NH_3 - 1.00 *M* NH_4Cl

C) 1.00 *M* NH_4Cl D) 1.00 *M* HCl

40. What will happen if a small amount of hydrochloric acid is added to a 0.1 *M* solution of HF?

A) The percent ionization of HF will increase

B) The percent ionization of HF will decrease

C) The percent ionization of HF will remain unchanged

D) K_a for HF will increase

Q3: Answer (T) for True sentences Or (F) for False sentences: (1 Mark for each) (10 Marks)

41. Removal of one of the products will shift the equilibrium in the backward reaction.

42. The interaction of ions of a salt and the ions of water is called "hydrolysis".

43. The pH of a sodium acetate solution that is 0.25 *M* CH_3COONa is 7.9 (K_a for $CH_3COOH = 1.75 \times 10^{-5}$ and $K_w = 1 \times 10^{-14}$).

44. Colligative properties are used for the determination of melting point and boiling point of a given solution.

45. Selective precipitation of sulfides cannot be accomplished very effectively in solutions containing only H_2S.

46. If $Q_{ip} = K_{sp}$ of CaC_2O_4, the solution is saturated and precipitation will be observed.

47. In the equilibrium: $2CO_{(g)} + O_{2(g)} \rightleftharpoons CO_{2(g)}$, both K_c and K_p have the same value.

48. At equilibrium, the concentrations of the reactants and products will be equal.

49. If 2.74×10^{-5} *M* of Na_2CrO_4 is added to 225 mL of 0.00015 *M* $AgNO_3$, a precipitate of Ag_2CrO_4 ($K_{sp} = 4.2 \times 10^{-12}$) will be formed.

50. Large K_{sp} value and low initial ion concentrations favors the completeness of precipitation.

Q4: (*Oral Examination*): Answer (T) for True sentences Or (F) for False sentences: (10 Marks)

51. A radical is a molecular fragment with an even number of unshared electrons.

52. C_nH_{2n} is the molecular formula of alkenes and cycloalkanes.

53. Carbonate ion has two C=O bonds and one C-O bond.

54. Heterocyclic compounds must contain at least two heteroatoms instead of carbon atoms.

55. In each chain-propagation step, a radical is consumed, but another radical is not formed.

56. The value of the equilibrium constant, K, depends only on the temperature of the reaction.

57. Successive sharp increase in the K_a values during dissociation of H_3PO_4 in the second and the third steps is obtained.

58. The pH of a 0.10 *M* solution of barium hydroxide is 13.30.

59. AgCl ($K_{sp} = 1.8 \times 10^{-10}$) can be precipitated on adding municipal tap water ($[Cl^-] = 1 \times 10^{-6}$ *M*) to 0.100 M Ag^+ ions.

60. The colligative properties of a diluted solution depend on the molecular weight of the solute.

Examiners: *Prof. Hassan A.H. El-Sherief, Prof. Ali A. Abdel-Hafez, Prof. Bahaa M. Abu-Zied, Ass. Prof. Mohamed I. Said, Dr. Doaa A. Abdel-Kader, Dr. Abdelreheem A. Saddik*

GOOD LUCK

Faculty of Science
Chemistry Department

Assiut University

UR-020 Quality Assurance Final Exam- 13th June 2022 **Time allowed: 2 Hrs**

(A) Answer the following questions: *(25 marks)*

1. Mention and discuss- in details- the governmental institutions that set the environmental standards.

2. What are the documents you need for ISO 14001?

3. What are the 5 P's of Marketing? Discuss each in detail.
4. What are the Internal and External communications that the organizations must met?

5. What are the topics that the quality systems related SOPs should generally cover to capture the core quality control and quality assurance activities and processes?

(B) Complete: *(15 marks)*

1. ..... and ..... systems together constitute the key quality systems.
2. Environmental standards are ..... or ..... implemented for the treatment and maintenance of the environment.
3. Environmental standards should preserve ..... and the ....., protect against ....., and repair ..... caused by .....
4. Historically, the development of environmental standards was influenced by two competing ideologies: .....and ..... .
5. ISO 14001 requires organisations to define and execute ....
6. Loss of ....., ..., ... and ..... are common examples of environmental emergencies that organisations may need to plan to manage.
7. An internal audit is a key aspect of an ....., assessing not just ....., but also ..... They also help to .....
8. It is mandatory for organizations to establish, manage and monitor their quality control and quality assurance systems and their integral standard operating procedures and other quality documents to .....
9. A quality system is defined as ....., ..., ..., ... and .....for implementing quality management.
10. ISO standards, such as ISO 9001, ISO 14001, and ISO 27001, serve as a ..... for businesses. Clearly defined standards and requirements make it easier for companies to ..... .
11. Quality standards could be ..... set by your organization, ... set by the broader industry, or ..... set by local, state, national, and international regulators.
12. High levels of quality are essential to achieve ..... .

13. Quality, a source of competitive advantage, should remain a hallmark of Company ..... and ..... .
14. High quality is not an added value; it is ..... .
15. Everyone in a company is responsible for the quality of ..... and ..... .

C) Choose the correct Answer: *(10 marks)*

1. The key element of quality systems is:
   a. Quality control
   b. quality assurance
   c. both a, b.
2. Top management commitment and its active involvement are critical to ensure at all times the:
   a. adequacy, suitability, effectiveness
   b. efficiency of the quality systems.
   c. both a, b.
3. Company employees constitute the most important resource for improving quality. Each employee in all organizational units is responsible for:
   a. ensuring that their work processes are efficient
   b. Not continually improving.
   c. both a, b.
4. To foster teamwork both within and across organizational units, top management should provide
   a. the training
   b. an appropriate motivating environment
   c. both a,b.
5. By meeting quality standards, companies often reap better:
   a. Non-profits
   b. reduce losses.
   c. both a,b.
6. Quality management includes those aspects of the overall management function that determine and implement the:
   a. Company quality policy
   b. quality objectives.
   c. both a,b.
7. Quality control is focused on fulfilling quality requirements, it encompasses:
   a. the operational techniques
   b. activities undertaken within the quality assurance system
   c. both a,b.
8. Quality assurance includes all those planned and systemic actions that are established to ensure that:
   a. the trial is performed
   b. the data are generated, documented (recorded), and reported in compliance with GP
   c. both a, b.
9. The quality documents are established by a nominated body, it includes:
   a. consensus
   b. non-approved
   c. both a, b.
10. SOPs are Level 2 quality documents and, along with other relevant quality documents, they ensure the:
    a. effectiveness of quality systems.
    b. efficiency of quality systems.
    c. Both a, b.

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Good Luck

Examiner: Prof Nagwa Abo El-Maali

Industrial Chemistry Program — Final Exam

Chemical Manufacturing process — Time: two hours

First question: **(14 degrees)**

Build a flowsheet supported with chemical equations for production phosphoric acid by using sulfur ore and phosphate rock with formula ($2Ca_3(PO_4)_2.F$). Describe the inputs, outputs and stages of the manufacturing process.

Second question: **(18 degrees)**

Choose the correct answer:

1- To decrease the furnace temperature in sulfuric acid production, _____ air flow. (increase – decrease – equalize)

2- The positive free energy reactions are going _____ (thermodynamically – kinetically – practically)

3- The chemical process, which used for oil refining is called _____ (evaporation – condensation – distillation)

4- _____ unit: Uses hydrogen to upgrade heavier fractions from the crude oil distillation and the vacuum distillation units into lighter, more valuable products. (Distillation - Hydrocracker - Naphtha hydrotreater - Isomerization)

5- _____ is a catalytic chemical process widely used to remove sulfur (S) from natural gas and from refined petroleum products, such as gasoline or petrol, jet fuel, kerosene. (Hydrodenitrogenation (HDN) - Hydrogenation - Hydrodesulfurization (HDS))

6- _____ it is used to prevent and reduce the dissolution and toxicity of some heavy metal elements such as cadmium in contaminated soil. (Diammonium Phosphate - Dicalcium Phosphate – Diammonium nitrate)

7- The main input in cement industry is _____. (lime stone – gypsum – sand)

8- _____ is the process, which has less opportunity for the buildup of radionuclides (chloride - Nitration – sulphate - Nitrosation)

9- The quench zones which separate successive catalyst beds have the following functions

a- To cool the partially reacted fluids with hydrogen quench gas

b. To assure a uniform temperature distribution of the fluids entering the next

catalyst bed

C. To mix efficiently and disperse evenly the fluids over the top of the next catalyst bed

D. all of the above

Third question **(18 degrees)**

True or false:

1- The main inputs in catalyzed hydrogenation are hydrocarbons and hydrogen. ( )

2- Chloride route has better quality than sulfuric acid route in production titanium oxide pigment. ( )

3- Gypsum is added to clinker in the cement industry to increase the cement resistance for acids mediums. ( )

4- The cracking reaction requires heat, while the hydrogenation reaction generates heat. ( )

5- To reduce the quantity and toxicity of some fertilizer elements in the environment, we can mitigate the effect of nitrates in ground water by using acetic acid derivatives. ( )

6- Chemical fertilizers do not cause environmental or health damage if the added amount exceeds certain percentages. ( )

7- Magnetite is used to improve the speed and efficiency of ammonia synthesis. ( )

8- Phosphate fertilization, it is one of the most important agricultural applications that contribute to the pollution of water, food and soil. ( )

9- Hydrocracking catalysts are dual functional. ( )

Good Luck

جامعة أسيوط	امتحان الفصل الدراسى الثاني 2022\2021	لجنة الممتحنين:
كلية العلوم	امتحان مقرر: مهارات الإتصال والتفاوض	د. محمد نادي الحبشي
برنامج الكيمياء الصناعية	تاريخ الامتحان: 2022/06/22م	

السؤال الأول : ضع علامة √ أمام العبارة الصحيحة و علامة X أمام العبارة الخاطئة **(25 درجة):**

1. يساعد الإستماع على صنع سياسات أفضل.
2. يتم في عملية الاتصال المكتوب الاختيار الدقيق للكلمات.
3. تنطوي عملية الاتصال على العديد من المكونات مثل مرسل الرسالة، الرسالة الفعلية التي يتم إرسالها، وترميز الرسالة.
4. يستخدم الاتصال الشفهي في التفويض المناسب للمسؤوليات.
5. يستخدم المستقبل الرموز (الكلمات أو الوسائل الرسومية أو المرئية) لإيصال الرسالة وإنتاج الاستجابة المطلوبة.
6. تستهدف الرسالة الوصول إلى المرسل الذي يقوم بفك شفراتها.
7. التغذية المرتدة Feedback هي المكون الرئيسي لعملية الاتصال حيث تسمح للمرسل تحليل فعالية الرسالة التي قام بإرسالها إلى المستقبل.
8. تتضمن بداية عملية الاتصال قيام المرسل بإنشاء أفكار يخطط لإرسالها إلى شخص آخر أو مجموعة من الأشخاص.
9. إرسال رسائل الاتصال هي وسائل تحويل الأفكار من المعلومات التي تريد إرسالها إلى صيغة معينة.
10. الإتصال الصاعد يتدفق من مستوى أعلى في المنظمة إلى المستوى أدنى.
11. الاتصال غير اللفظي يعتبرأكثر دقة وإيجازًا وصراحة.
12. فك التشفير يعني تفسير الرسالة وتحويلها إلى فكرة.
13. من المهم أن يقوم المستقبل بطرح أسئلة جيدة للحفاظ على تدفق الاتصال.
14. يوصى باستخدام الاتصال المكتوب عندما تكون مسألة الاتصال من النوع المؤقت أو عندما يكون التفاعل المباشر مطلوبًا.
15. قناة الإتصال هي الوسيلة التي تستخدم لتبادل / نقل الرسالة من المرسل إلى المستقبل.
16. يتم في الاتصال غير اللفظي نقل المشاعر والعواطف والمواقف والأفكار من خلال حركات الجسم.
17. يعني الاتصال الأفقي تدفق المعلومات من مستوى أدنى إلى مستوى أعلى في المنظمة .
18. الاعلان هو المكون الأساسي في الاتصالات التسويقية المتكاملة.
19. يكون الاتصال الافقي في نفس مستويات التسلسل الهرمي في المنظمة.
20. يحدث الإتصال الصاعد بين مدير ومجموعة خارجية مثل الموردين والبائعين والبنوك.
21. من ضمن وظائف الاستماع مشاركة العاملين للخبرات فيما بينهم.
22. يساعد الاستماع الجيد على حصول العاملين على المعلومات وتفهمهم لكيفية حل المشكلات.
23. المحادثة هي الفكرة الرئيسية للإتصال التي يريد المرسل توصيلها.
24. يعرف الإعلان بأنه اتصال شخصي مباشر بين ممثلي المنظَّمة والعميل المستهدف .
25. يشعر العميل بالإهتمام عن طريق المقابلة الشخصية التي تتم مع موظف البيع الشخصي.

السؤال الثاني: اختر الاجابة المناسبة **(25 درجة)**

26. يعد..... من أهم الوسائل الاتصالية الترويجيَّة المباشرة التي يلجأ إليها أصحاب العمل من أجل التأثير على سلوكيات ألافراد بغية الحفاظ عليهم

A = البيع الشخصي	B = تنشيط المبيعات	C =الاتصال الفعال	D = الاعلان

27. تكلفة تطوير وتشغيل فريق اتصال خاص بالمبيعات تعد تكلفة..... في البيع الشخصي مقارنة بغيرها.

A = منخفضة	B = متساوية	C = مرتفعة	D = ليس مما سبق

28. تميز هذه المرحلة بين موظف البيع الخاص بالاتصال الشخصي الناجح وموظف البيع غير الناجح.....

A = اتمام عمليه البيع	B = بدء العلاقة مع العملاء	C = A& B معاً	D = اكتشاف العملاء المرتقبين

29.يعتبر من أنماط الإتصال الخاص بالبيع الشخصي.....

A = مركز البيع	B = الذكاء الصناعي	C = كل ما سبق	D =ليس مما سبق

30.تنتهي مراحل الاتصال في البيع الشخصي ب .....

A = الرد على الاعتراضات	B = خدمات ما بعد البيع	C = بدء العلاقة مع العملاء	D =ليس مما سبق

31.من مراحل عملية تخطيط الاتصالات التسويقيه المتكاملة .....

A =تحليل الوضع	B = تحديد الجمهور المستهدف	C = تحديد المكانه الذهنيه	D = كل ما سبق

32.تعتبر آخر مرحله فى التخطيط للاتصالات التسويقيه المتكاملة .....

A = تحديد الاهداف	B = تحديد المكانه الذهنية	C = تحديد مكونات المزيج الاتصالى	D =تحديد اتجاه عملية الاتصال

33.من مكونات مزيج الاتصالات التسويقية .....

A = الإعلان	B = البيع الشخصي	C = تنشيط المبيعات	D = كل ما سبق

34.يعرف..... بأنه أي شكل من أشكال الاتصالات غير الشخصية المدفوعة والمتعلقة بمنظمة ربحية أو غير ربحية.

A = الترويج	B =الاتصال الشخصي	C =الاعلان	D = تنشيط الاتصال

35.الخطوة الاولي في إدارة الإتصال في الحملة الاعلانية هي .....

A = إجراء بحوث الاعلان	B = اختيار الوسائل الاعلانية	C = تحديد الميزانية	D = ليس مما سبق

36.يختلف..... عن باقي مزيج الاتصال التسويقي وخصوصا في طبيعة الاتصال المباشرة و الشخصية بين المنظَّمة و العميل.

A = الإعلان	B = البيع الشخصي	C = الإتصال المتباعد	D = الاتصال الترويجي

37.تبدأ عملية..... بتحليل الوضع وبناء على هذا التحليل يتم اختيار السوق المستهدفه وتحديد المكانة الذهنية للعلامة التجارية.

A=الاتصال المباشر	B=البيع الشخصي	C=تخطيط الاتصالات التسويقية المتكاملة	D=تخطيط اتصالات السوق

38.التصميم الفعال للاتصالات التسويقية يكون مبنى على معرفة ما يدور بذهن .....

A = المستهلكين	B = مديرين الشركة	C = موظفي التسويق	D = موظفي البيع الشخصي

39.تحديد ..... هو الذي يؤثر على ما يجب أن تحتويه الرسالة الاتصالية (ماذا يجب أن يقال ؟كيف يقال ؟وأين يقال؟)

A = موضوع الاتصال	B = قناة الاتصال	C = نوع الاتصال	D = جمهور الاتصال

40.تعتمد .....على تقديم حجج منطقية، ويتم تصميمها بهدف التأثير في المكونات الادراكية للاتجاهات مثل المعتقدات و المعرفة.

A = الاستراتيجية العقلانية	B = الاستراتيجية الإرشادية	C = الاستراتيجية الإدارية	D = استراتيجية الاتصال

41.يعتبر الإتصال والتفاوض مع ..... أسهل بالمقارنة مع غيرهم من المستهلكين.

A = المستهلكون المحتملون	B = المستهلكون السابقون	C = المستهلكون الحاليون	D = ليس مما سبق

42.يقصد بـ.....هو عملية التحضير لجهود الشركة الاعلانية بشكل يحقق التكامل مع كافة عناصر الاتصالات التسويقية التي تستخدمها الشركة.

A = ادارة الاعلان	B = تسويق الإعلان	C = إتصال الإعلان	D = ليس مما سبق

43.يمكن إستخدام استراتيجية الإتصال..... في اعلانات المشاعر.

A = العقلانية	B = العاطفية	C = الحسية	D = ليس مما سبق

44.....تتكون من الأنشطة والاهتمامات والأراء.

A = المتغيرات الديموجرافية	B =المتغيرات الفردية	C = المتغيرات الجماعية	D = المتغيرات النفسية

45.يتم تكوين المكانة الذهنية المدركة بناء على الجودة والسعر و.....

A = الأهداف تشغيلية	B = الأهداف التنظيمية	C = الكمية	D = الاتصالات التسويقية

46.يساهم الإعلان باعتباره أحد وسائل الاتصال في تعزيز .....

A = زيادة المبيعات	B = تدعيم جهود البيع الشخصي	C = الصورة الذهنية للمنظمة	D = كل ما سبق

47.تعد عملية ..... الأساس في انطلاق قرار الاتصال نحو التنفيذ في السوق.

A = وضع الخطة	B = تحديد نوع الإعلان	C = تحديد الموازنة	D = ليس مما سبق

48.لكي يمكن تعريف عدد كبير من العملاء الحاليين والمرتقبين بالمنتجات ومزاياها وعيوبها، يمكن اللجوء إلى ..... كوسيلة للإتصال.

A = الإعلان	B = البيع الشخصي	C = الدعاية	D = النشر الصحفي

49.....يراعي تحقيق التنسيق والانسجام بين رسالة الإتصال الإعلانية للعلامة التجارية وباقي المنتجات التي تقدمها الشركة.

A = وكالة الإعلان الخارجية	B = فريق الاعلان داخل الشركة	C = ليس مما سبق

50.يتم إجراء ..... بهدف التعرف على المستهلك وفهمه، وماهي المنافع الرئيسية للمنتج من وجهة نظر المستهلك،

A = الإتصال الإعلاني	B = بحوث الإعلان	C = البيع الشخصي	D = الاتصال غير الشخصي

مع اطيب التمنيات بالنجاح والتوفيق،،،،