# *YEKA SUB-CITY EDUCATION BUREAU*

GRADE EIGHT MODEL EXAM

SUBJECT CHEMISTRY

Time allowed 1hr

2013 E.C/2020 G.C

Choose the best answer from the following alternative

1. Which of the following basic concern of chemistry that deals with the characteristics of substance?
   A) Composition C) Transformation
   B) Structure D)Property
2. Chemical that is applied on agriculture lands to increase crop production is ……
   A) Herbicide C) Fertilizer
   B) Insecticide D) Pesticide
3. Which one is **NOT** a use of chemistry?
   A) Overcome health problems by producing effective drugs
   B) In the production of cement, textile, paints, glass, etc.
   C) Production of agricultural chemicals
   D) Classifying organism in to different species
4. The main product of a chemical industry located at Bulbula
   A) Sulfuric acid C) Caustic soda
   B) Soda ash D) Textile
5. Which of the following deals with properties, transformation and relationship between matter and energy?
   A) Geochemistry C) Physical chemistry
   B) Biochemistry D) Industrial chemistry

6. Given that 40mL of aluminum has a mass of 108g, what is the density of aluminum?

A) 1.7g/mL C) 2.7g/mL

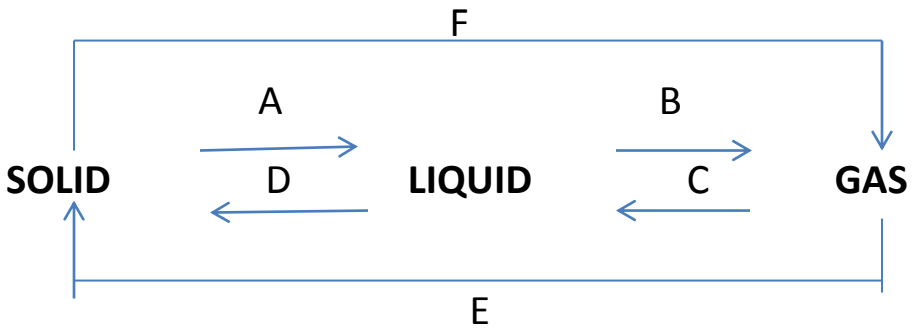
B) 0.7g/ML D) 3.7G/ML

7. Which property of substance is **N0T** measurable?

A) Solubility C) Conductivity

B) Melting point D) Odorous

8. Which physical process is represented by the letter **A** and **F** in figure below?




A) Boiling & Deposition C) Melting& sublimation

B) Freezing & Condensation D)Sublimation & Boiling

9. Which one of the following is homogeneous mixture?

A. Sand & water C) Muddy water

B. Sea water D) Oil & water

10. Which types of physical change is the change of size & shape of the material?

A) Change of state C) Solution

B) Mechanical change D) Dissolving

11. Which one is **NOT** a chemical change?

A) Digestion of food C) Growth of plant

B) Burning of wood D) Evaporation of water

12. An instrument that used to separate **two immiscible** liquid

A) Crucible
B) Separatory funnel
C) Flask
D) Filter paper

13. During filtration process the solid which remains on the filter paper is known as the……..

A) Distillate
B) Filtrate
C) Residue
D) All

14. One of the following pure substances can **NOT** be broken down into simpler substance

A) Acid
B) Element
C) Mixture
D) Compound

15. The chemical symbol **Tin** is

A) Ti
B) Te
C) Ag
D) Sn

16. Natrium is the Latin name for:

A) Nitrogen
B) Calcium
C) Sodium
D) Copper

17. Which one of the following is the chemical formula for Iron (III)Sulphate?

A) $Fe_2(SO_4)_3$
B) $FeSO_4$
C) $Fe_2(SO_3)_3$
D) $FeSO_3$

18. Which of the following **is NOT** polyatomic molecules?

A) Ozone
B) Nitrogen
C) Sulphur
D) Phosphorus

19. How many atoms are there in **two** molecules of $H_2SO_4$?

A) 9
B) 6
C) 14
D) 7

20. The name of $N_2O$ is

A) Nitrogen dioxide
B) Dinitrogen monoxide
C) Nitrogen monoxide
D) Dinitrogen tetraoxide

21. When the equation $Mg(OH)_2 + HCl \longrightarrow MgCl_2 + H_2O$ is balanced, what is the coefficient of water?

A) 2
B) 4
C) 1
D) 3

22. Which of the following **is NOT** polyatomic ion?

A) $NH_4^{+}$
B) $CO_3^{-2}$
C) $SO_4^{-2}$
D) $Ca^{+2}$

23. In all chemical reaction the total mass of the reactants is equal to that of the product. This Law is:

A) Law of constant proportion
B) Law of mass action
C) Law of conservation of mass
D) Law of multiply proportion

24) The valence number of phosphorus (P) in $PH_3$

A) 1
B) 2
C) 3
D) 4

25) Which of the following is **NOT** true about quantitative meaning of the given symbol and formula?

A) 3Fe represent 3 atoms of hydrogen

B) $H_2$ means one molecule of hydrogen

C) $5N_2$ means 5 molecules of nitrogen

D) $P_4$ indicate 4 molecules of phosphorus

26. A hypothetical element (X) has valence of **3** and hypothetical element(Y) has valence of **2**. What would be the formula of a compound formed between X and Y?

A) $X_2Y_3$ C) $XY_3$

B) $X_3Y_2$ D) $X_2Y$

27. The first atomic theory was proposed by……

A) Dalton C) Aristotle

B) Newland D) Democritus

28. Which of the following statement is **incorrect** about neutral atom?

A) Neutron is assigned negative charge

B) An atom is electrically neutral

C) Nucleus is the central part of an atom

D) An atom contain equal number of protons and electrons

29. How many electrons does $^{14}_{7}N^{-3}$?

A) 10 C) 11

B) 7 D) 14

30. What would be the atomic numbers of an atom with seven valence electrons?

A) 9 C) 7

B) 10 D) 8

31) The sum of the number of protons and neutrons in an atom is known as:

A) Atomic weight C) Atomic mass

B) Atomic number D) Mass number

32) An atom $^{23}_{11}Na$ contains:

A) 11 protons, 12 neutrons and 11 electrons

B) 12protons, 11neutrons and 12 electrons

C) 11 Protons, 23 neutrons and 23 electrons

D) 23 protons, 12 neutrons and 11 electrons

33) …… is the arrangement of electrons in the shells of an atom

A) Valence electrons C) Energy level

B) Electronic configuration D) Atomic shell

34) The electronic configuration of calcium is (Z = 20)

A) 2,8,10 C) 2,10,8

B) 2, 2,6,10 D) 2,8,8,2

35) The position of the element with atomic number 16 in the periodic table:

A) Group IVA and period 6 C) Group VI and period 3

B) Group III and period 4 D) Group 6 periods III

36) Which of the following are increases across a period?

A) Nuclear charge
C) Atomic size
B) Metallic character
D) Number of shell

37) As Newland is for "Law of Octave's "…….is for "Law of Triads "

A) Mendeleev
C) Lother Mayer
B) Dobereiner
D) Hennery Mosley

38) Which of the following element is **NOT** found in the same period?

A) $_{12}Mg$
C) $_{14}Si$
B) $_{11}Na$
D) $_{19}K$

39) Which one of the following is organic compound?

A) Acid
C) Chalk
B) Soap
D) Water

40) The correct formula of octane is:

A) $C_8H_{16}$
C) $C_8H_{18}$
B) $C_8H_{14}$
D) $C_8H_8$

41) All alcoholic beverages contain:

A) Formalin
C) Ethanoic acid
B) Methane
D) Ethanol

42) Which of the following is basic oxide?

A) $SO_2$
C) $N_2O_3$
B) $CO_2$
D) $K_2O$

43) What is the color of acidic solution in phenolphthalein?

A) Colorless C) Red

B) Yellow D) Pink

44) Which of the following is **NOT** the property of base?

A) A base change the color of indicators

B) A base has a bitter taste

C) A base release hydrogen ion in water

D) A base neutralizes acidic solution

45) Identify a binary salt among the following is:

A) $Na_2CO_3$ C) $CaCO_3$

B) $Al_2Cl_3$ D) $K_2SO_4$

46) Which of the following is neutralization reaction?

A) $2K + 2HCl \longrightarrow 2KCl + H_2$

B) $CaCO3 \longrightarrow CaO + CO_2$

C) $2NaOH + H_2SO_4 \longrightarrow Na_2SO_4 + 2H_2O$

D) $MgO + H_2O \longrightarrow Mg(OH)_2$

47) Which of the following is different from the other?

A) Ductility C) Luster

B) Sonorous D) Brittle

48) Which of the following is **NOT** the use of aluminum?

A) For making jewelry C) for making electric cable

B) Making cooking utensils D) Construction of air plane

49) The most metallic element:

A) Na C) Ag

B) Cu D) Pt

50) Limonite, Siderite and Hematite are an ore of

A) Aluminum C) Iron

B) Copper D) Calcium

51) An alloy of gold and silver is:

A) Brass C) Steel

B) Electrum D) Solder

52) Which of the following is used to make artificial joint bone?

A) Ag C) Platinum

B) Gold D) Tantalum

53) Which of the following is **INCORRECT** about an alloy?

A) Alloys are homogeneous mixture

B) Alloys are solid solution

C) Alloys made from one kind of element

D) Alloys used to modify color

54) Graphite is used for:

A) Making rat poison C) Match

B) Making lead pencil D) Jewelry

55) What are the two allotropic form of phosphorous?

A) White and red

B) Rhombic and monoclinic

C) Diamond and fullerenes

D) Oxygen and ozone

56) The most abundant non-metal in the earth's crust is:

A) Carbon

B) Nitrogen

C) Oxygen

D) Sulphur

57) 78% percent of air by volume is:

A) Oxygen

B) Argon

C) Carbon dioxide

D) Nitrogen

58) Sulphur is extracted from the ground by using…….

A) Frasch process

B) Contact process

C) Haber process

D) Solvay process

59) Which of the following is used in dry cleaning?

A) $CS_2$

B) $CaC_2$

C) $CCl_4$

D) CO

60) Which of the following does NOT contain sulphur?

A) Galena

B) Cinnabar

C) Dolomite

D) Iron pyrite

## ANSWER

| | | | | | |
|---|---|---|---|---|---|
| 1. **D** | 11. **D** | 21. **A** | 31. **D** | 41. **D** | 51. **B** |
| 2. **C** | 12. **B** | 22. **D** | 32. **A** | 42. **D** | 52. **D** |
| 3. **D** | 13. **C** | 23. **C** | 33. **B** | 43. **A** | 53. **C** |
| 4. **B** | 14. **B** | 24. **C** | 34. **D** | 44. **C** | 54. **B** |
| 5. **C** | 15. **D** | 25. **D** | 35. **C** | 45. **B** | 55. **A** |
| 6. **C** | 16. **C** | 26. **A** | 36. **A** | 46. **C** | 56. **C** |
| 7. **D** | 17. **A** | 27. **D** | 37. **B** | 47. **D** | 57. **D** |
| 8. **C** | 18. **B** | 28. **A** | 38. **D** | 48. **A** | 58. **A** |
| 9. **B** | 19. **C** | 29. **A** | 39. **B** | 49. **A** | 59. **C** |
| 10. **B** | 20. **B** | 30. **A** | 40. **C** | 50. **C** | 60. **C** |