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General Science, 2017 EC, Grade 8 model exam, Arada

Grade 8 · General Science · 2017 E.C.

Time allowed: 120 minutes **Questions:** 59 **Total marks:** 59

Name _____ Grade _____ ID No. _____ Date _____

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1. Which branch of natural science explores the chemical process with in and related to living organisms. (1)

A. Biophysics
B. Biochemistry
C. Physical chemistry
D. Geology

2. Which of the following is correct about indigenous knowledge? (1)

A. It is established by local people
B. It is integral part of the research process
C. It is system of knowledge established through scientific method
D. It is commonly recognized as western science

3. Who apply science and mathematical knowledge and skills to produce a very useful tool? (1)

A. Technology
B. Technologist
C. Science
D. Researchers

4. Who is a famous Ethiopian scientist works on human physiology, the impacts of pesticides on human health and uses of medicinal plants? (1)

A. Dr.Akiliu Lema
B. Prof.Yalemtsehay Mekonnen
C. Dr. Tewolde Berhane
D. Prof. Gabisa Ejeta

5. Which one of the following is the world famous scientist who developed special relativity theory? (1)

A. Albert Einstein
B. Michael Faraday
C. Isaac Newton
D. Marie Curie

6. A metallic apparatus which supports the wire gauze is:- (1)

A. a tripod stand
B. ring stand
C. Test tube stand
D. Ring clamp

7. Which of the following is not true about main ideas in the particle model of matter? (1)

A. All matter is made up of tiny particles
B. The particles of matter move continuously
C. There are force between the particles
D. Adding heat to matter makes the particle move slower

8. Which of the following terms used to describe the odor of Doro wet? (1)

A. Fruity
B. Pungent
C. Fragrant
D. spicy

9. What is the direct conversion of solid ice to gas? (1)

A. Freezing
B. Condensation
C. Sublimation
D. Deposition

10. Which of the following is not property of solid? (1)

A. Particles are orderly arranged
B. Particles are not compressible
C. Diffuse in all direction with random motion
D. Have definite shape and volume

11. The roughness or smoothness of substance is called _____? (1)

A. Taste
B. Texture
C. Odor
D. Color

12. Out of the following which one is intensive property of matter? (1)

A. Mass
B. Length
C. Density
D. Volume

13. Which of the following is true about chemical property of substance? (1)

A. Identity of substance cannot be changed physical process
B. Easily identified by viewing or touching
C. It is easily reversed to original substance by
D. Describes the formation of new substance

14. The density of a substance is defined as the ---? (1)

A. Ratio of its mass to volume
B. Product of its weight and volume
C. Ratio of its weight to volume
D. Product of its mass and volume

15. Which of the following is not property of metals? (1)

A. Metals are ductile
B. Metals are brittle
C. Metals are lustrous
D. Metals have high density

16. All of the following are heterogeneous mixtures except : (1)

A. Blood
B. Ink
C. Brass
D. Smoke

17. Which one of the following element can be classified under metalloid element? (1)

A. Silicon
B. Bromine
C. Mercury
D. Manganese

18. Mixtures are substances that consists of (1)

A. Two or more elements chemically combined in a fixed ratio.
B. One types of atom.
C. Two or more pure substances
D. The simplest type of matter that retains characteristic property.

19. Which of the following is classified under a compound? (1)

A. Coca cola
B. Silver
C. Sugar
D. Air

20. Your General science teacher wants to investigate preparation of oxides by burning a yellow sulfur powder which is changed to red-brown color this change is: (1)

A. Chemical change
B. Mechanical change
C. Change of state
D. Physical change

21. A physical change is a change that (1)

A. Forms a substance with new composition
B. Results in the formation of new property
C. Results in the formation of new substance
D. Does not alter the composition of the substance

22. Which of the following characteristics distinguishes chemical change from physical change? Chemical change is (1)

A. No new substance is formed ,while physical change forms new substance
B. Easily reversed ,while physical change is difficult to reverse
C. A change in the composition of substance, while physical change is not altered
D. Energy change is not necessary, while in physical change energy change is necessary

23. The separation method that used to separate to immiscible liquids like oil and water is (1)

A. Simple distillation
B. Evaporation
C. Filtration
D. Decantation

24. Which of the following method of separation of mixtures used to separate suspended solids from liquids? (1)

A. Filtration
B. Decantation
C. Simple distillation
D. Evaporation

25. If you are asked to separate and collect the salt crystal and water from a mixture of salt solution ,which method of separation can be used? (1)

A. Evaporation
B. Simple distillation
C. Decantation
D. Sedimentation

26. What is the name of an element having the chemical symbol "Hg"? (1)

A. Silver
B. Mercury
C. Lead
D. Gold

27. Which of the following elements correctly matched with its Latin name? (1)

A. Sodium ---Kalium
B. Silver--- Aurum
C. Lead ---Stannum
D. Iron ---Ferrum

28. Which of the following chemical formula is formula of iron(III)Sulphate? (1)

A. $FeSO_4$
B. $Fe_2(SO_4)_3$
C. $Fe_3(SO_4)_2$
D. $Fe(SO_4)_3$

29. Quantitatively, the formula 2Cl 2 represents (1)

A. 1 molecule of chlorine
B. 4molecules of chlorine
C. 2 atoms of chlorine
D. 2 molecules of chlorine

30. In the reactions between Oxygen molecule and hydrogen molecule which gives water. In the above reaction what is the coefficient of water? (1)

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

31. What is the byproduct of photosynthesis? (1)

A. H 2 O & C 6 H 12 O 6
B. O 2 & C 6 H 12 O 6
C. H 2 O & O 2
D. CO 2 & H 2 O

32. Which of the following chemical reaction used for synthesis of ammonia? (1)

A. By the reaction of hydrogen and nitrogen
B. By the reaction of hydrogen and oxygen
C. By the reaction of methane and oxygen
D. By the reaction of sulphure and oxygen

33. Which of the following organic compounds used for cleaning of wounds in clinics and hospitals? (1)

A. Formalin
B. Ethyne
C. Vinegar
D. Ethanol

34. Which of the following pairs of oxides are acid anhydrides? (1)

A. SO_2, P_2O_5, N_2O_5
B. CaO, Na_2O, MgO
C. N_2O, Li_2O, NO
D. K_2O, CO, H_2O

35. When an acid reacts with active metals, which one of the following gas is usually liberated? (1)

A. Oxygen gas
B. Hydrogen gas
C. Chlorine gas
D. Nitrogen gas

36. If you burn magnesium in the presence of air, what will be the possible product formed? (1)

A. $Mg(OH)_2$
B. MgO
C. Mg_2O_2
D. Mg

37. Suppose you are in science laboratory. Take two clean test tubes and pour 5 ml of NaOH solution in each of the tubes. Labeling the test tubes as A and B, then insert a blue litmus paper in A and red litmus in B. Which one of the following would be observed? (1)

A. The litmus paper in B changed to blue
B. The litmus paper in A changed to red
C. Sour taste is felt around both test tubes
D. The litmus paper in B changed to pink

38. What is the formula of a salt formed from nitric acid and potassium hydroxide? (1)

A. KNO_2
B. KNO_3
C. $KHNO_3$
D. $K(NO_3)_2$

39. Which of the following is an application of neutralization reaction? (1)

A. Making of car battery
B. Treatment of factory wastes
C. Production of soaps
D. Preparation of ammonia

40. The idea of atom was first proposed by the Greek philosopher _____ (1)

A. Dalton
B. Aristotle
C. Democritus
D. Socrates

41. The central parts of an atom consisting both proton and neutron is: (1)

A. Atomic number
B. Mass number
C. Nucleus
D. Electronic shell

42. An element has 92 protons, 92 electrons and 238 mass number. So what is its neutron number? (1)

A. 92
B. 184
C. 238
D. 146

43. A neutral atom has 16 neutrons and a mass number of 31, what will be its atomic number? (1)

A. 16
B. 15
C. 31
D. 47

44. Which of the following is categorized under molecule of compound? (1)

A. Br_2
B. O_3
C. Ne
D. H_2O

45. Which one of the following molecule is polyatomic? (1)

A. P_4
B. Cl_2
C. Xe
D. I_2

46. Organic compound is defined as the study of (1)

A. Compounds obtained from minerals
B. Carbon containing compounds
C. Non-carbon containing compounds
D. Nitrogen containing compounds

47. What is the chemical formula of alkyne that contains 20 hydrogen atoms? (1)

A. $C_{20}H_{38}$
B. $C_{11}H_{22}$
C. $C_{11}H_{20}$
D. $C_{20}H_{40}$

48. Which of the following represents a tentative explanation of certain scientific law? (1)

A. Hypothesis
B. Observation
C. Theory
D. Analyzing result

49. Which of the following statement is correctly presented in relation to the components of scientific investigation? (1)

A. Data collection is done before observation in science
B. Scientific investigation usually begins with observation
C. Scientific investigation should start with hypothesis testing
D. Hypothesis is tested before conducting experiment

50. Among scientific methods, which steps concerned on putting together your findings and presenting them to others? (1)

A. Communicating result
B. Test your hypothesis
C. Analyze result and draw conclusion
D. Establish your hypothesis

51. A process of finding the answer to a question using various research method is ____? (1)

A. Measurement
B. Scientific investigation
C. Physical quantity
D. Prefix

52. All of the following are true about the historical development of atomic theory? (1)

A. Aristotle supported the idea of discrete nature of matter
B. Democritus supported the idea of continuity nature of matter
C. Democritus proposed the existence of atoms
D. Aristotle proposed that matter is indivisible

53. Which one of the following list is among the indigenous units of measuring length? (1)

A. Hand span
B. Weqet
C. Meter
D. Square meter

54. Out of the following which one is fundamental physical quantity? (1)

A. Area
B. Velocity
C. Amount of substance
D. Density

55. When 2.25m is expressed in cm it will be _____? (1)

A. 225cm
B. 22500cm
C. 2250cm
D. 22.5cm

56. Suppose a time allowed for completing mathematics national examination for grade 8 is 2 hours. How much is this time in seconds? (1)

A. 120
B. 7200
C. 240
D. 720

57. The accepted value of a certain body is 14kg. If the students measure with in a laboratory and obtained the results, 11.5kg, 11.49kg and 11.48kg, then the measurement is: (1)

A. Accurate not precise
B. Precise not accurate
C. Both precise and accurate
D. Neither accurate nor precise

58. Which of the following sets of prefixes are arranged in increasing order? (1)

A. Mega, Kilo, Centi, Milli
B. Milli, Mega, Centi, Kilo
C. Centi, Kilo, Mega
D. Mega, Milli, Centi, Kilo

59. Grade eight students wants to do an activity. They first take a candle fix it on a table and light the candle, the candle will continue to be burned due to the presence of oxygen. Which scientific investigation do the student confirm in their activity? (1)

A. Ask question
B. Formulating hypothesis
C. Performing background research
D. Test the hypothesis by experiment

END OF THE EXAMINATION

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