

ARADA SUB CITY EDUCATIONAL OFFICE MODEL EXAMINATION FOR GRADE EIGHT

GENERAL SCIENCE JANUARY 2017 E.C

NUMBER OF QUESTIONS: 60

TIME ALLOWED 1 HOUR

GENERAL DIRECTIONS

THE BOOKLET CONTAINS **GENERAL SCIENCE** EXAMINATION. IN THIS EXAMINATION, THERE ARE A TOTAL OF **60 MULTIPLE CHOICE QUESTIONS**.

CAREFULLY SELECT THE BEST ANSWER AND BLACKEN ONLY THE LETTERS OF YOUR CHOICE ON THE SEPARATE ANSWER SHEET PROVIDED. FOLLOW THE INSTRUCTIONS ON THE ANSWER SHEET AND THE EXAMINATION PAPER CAREFULLY. USE ONLY PENCIL TO MARK YOUR ANSWERS. YOUR ANSWER MARK SHOULD BE HEAVY AND DARK, COVERING THE ANSWER SPACE COMPLETELY. PLEASE ERASE ALL UNNECESSARY MARKS COMPLETELY FROM YOUR ANSWER SHEET. YOU ARE ALLOWED TO WORK ON THE EXAM FOR **1 HOUR**. WHEN TIME IS CALLED, YOU MUST IMMEDIATELY STOP WORKING, PUT YOUR PENCIL DOWN AND WAIT FOR FURTHER INSTRUCTIONS.

PLEASE MAKE SURE THAT YOU HAVE WRITTEN ALL THE REQUIRED INFORMATION OF THE ANSWER SHEET BEFORE YOU START TO WORK ON THE EXAMINATION.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

2017 E.C ARADA SUB CITY EDUCATIONAL OFFICE FIRST SEMESTER

GENERAL SCIENCE MODEL EXAMINATION FOR GRADE 8 STUDENTS.

CHOOSE THE CORRECT ANSWERS FROM TH GIVEN OPTIONS AND BLACKEN THE LETTER OF YOUR CHOICE ON THE ANSWER SHEET PROVIDED.

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

A. Biophysics

C. Physical chemistry

B. Biochemistry

D. Geology

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

A. It is established by local people
scientific method

C. It is system of knowledge established through

B. It is integral part of the research process

D. It is commonly recognized as western science

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

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?

A. Dr.Aklilu Lema

C. Dr. Tewolde Berhane

B. Prof.Yalemtehay Mekonnen

D. Prof. Gabisa Ejeta

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

A. Albert Einstein

C. Isaac Newton

B. Michael Faraday

D. Marie Curie

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

- 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?

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

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

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

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

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

10. Which of the following is **not** property of solid?

- 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_____?

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

12. Out of the following which one is **intensive** property of matter?

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

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

- A. Identity of substance cannot be changed by 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 -----?

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

15. Which of the following is **not** property of metals?

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

16. All of the following are heterogeneous mixtures **except**:

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

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

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

18. Mixtures are substances that consists of

- 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?

- 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:-

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

21. A physical change is a change that

- 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

- 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

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

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

- | | |
|----------------|------------------------|
| A. Filtration | C. Simple distillation |
| B. Decantation | 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?

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

26. What is the name of an element having the chemical symbol “Hg”?

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

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

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

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

- A. FeSO_4 B. $\text{Fe}_2(\text{SO}_4)_3$ C. $\text{Fe}_3(\text{SO}_4)_2$ D. $\text{Fe}(\text{SO}_4)_3$

29. Quantitatively, the formula 2Cl_2 represents

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

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

31. What is the byproduct of photosynthesis?

- A. H_2O & $\text{C}_6\text{H}_{12}\text{O}_6$ C. H_2O & O_2
B. O_2 & $\text{C}_6\text{H}_{12}\text{O}_6$ D. CO_2 & H_2O

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

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

33. Which one of the following list is among the indigenous units of measuring length?

- | | |
|--------------|-----------------|
| A. Hand span | C. Meter |
| B. Weget | D. Square meter |

34. Out of the following which one is fundamental physical quantity?

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

35. When 2.25m is expressed in cm it will be _____?

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

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

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

37. 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:

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

38. Which of the following sets of prefixes are arranged in increasing order?

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

39. 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?

- | | |
|------------------------------------|--------------------------------------|
| A. Ask question | C. Formulating hypothesis |
| B. Performing back ground research | D. Test the hypothesis by experiment |

40. Which of the following represents a tentative explanation of certain scientific law?

A. Hypothesis

C. Theory

B. Observation

D. Analyzing result

41. Which of the following statement is correctly presented in relation to the components of scientific investigation?

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

42. Among scientific methods, which steps concerned on putting together your findings and presenting them to others?

A. Communicating result

C. Test your hypothesis

B. Analyze result and draw conclusion

D. Establish your hypothesis

43. A process of finding the answer to a question using various research method is_____?

A. Measurement

C. Scientific investigation

B. Physical quantity

D. Prefix

44. All of the following are true about the historical development of atomic theory?

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

45. The idea of atom was first proposed by the Greek philosopher_____

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

46. The central parts of an atom consisting both proton and neutron is:

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

47. An element has 92 protons, 92 electrons and 238 mass number. So what is its neutron number?

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

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

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

49. Which of the following is categorized under molecule of compound?

- A. Br₂ B. O₃ C. Ne D. H₂O

50. Which one of the following molecule is polyatomic?

- A. P₄ B. Cl₂ C. Xe D. I₂

51. Organic compound is defined as the study of

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

52. What is the chemical formula of alkyne that contains 20 hydrogen atoms?

- A. C₂₀H₃₈ B. C₁₁H₂₂ C. C₁₁H₂₀ D. C₂₀H₄₀

53. What is the name of an alkene which have the molecular formula of C_9H_{18} ?

- A. Nonane B. Nonyne C. Decene D. Nonene

54. Which of the following organic compounds used for cleaning of wounds in clinics and hospitals?

- A. Formalin B. ethyne C. Vinegar D. Ethanol

55. Which of the following pairs of oxides are acid anhydrides?

- 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

56. When an acid react with active metals, which one of the following gas is usually liberated?

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

57. If you burn magnesium in the presence of air, what will be the possible product formed?

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

58. 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?

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

59. What is the formula of a salt formed from nitric acid and potassium hydroxide?

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

60. Which of the following is an application of neutralization reaction?

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

