

S1 CHEMISTRY WORK**Instructions and information**

1. Use small notebook (16 pages) to answer the following questions
2. Draw a table like the one below and in it record your choice letter for all questions (Question 1 to Question 45)

1	2	3	4	5	...

3. Write properly
 4. Unit where questions are extracted are indicated to help you navigate your content with precision
 5. After you have completed filling in your choice in the table, start a new section below the table and explain your choice for each question (Minimum: 2 sentences, Maximum : 4 sentences)
Note: Make sure that your explanations are not 100% AI generated you may use it but thereafter you must refine your answers and provide a proper version of yours.
 6. Failing to explain your choice will lead to loss of all marks
 7. Failing to respect instructions will lead to complete cancellation of your work
 8. Work which will not be submitted on first day of school will not be considered.
-

UNIT 1: Chemistry and Society**1. Chemistry is best described as the study of:**

- A. Living organisms and their parts B. The composition, structure, and properties of substances
 C. Forces acting on moving objects D. Weather and climate patterns

2. Which of the following shows an application of chemistry in everyday life?

- A. Playing football B. Reading newspapers
 C. Manufacturing soap D. Drawing maps

3. Knowledge of chemistry contributes to Rwanda's economy mainly by:

- A. Increasing population size only B. Producing raw materials without processing
 C. Helping industries add value to raw materials D. Replacing agriculture

4. Which career below is directly linked to chemistry?

- A. Journalism B. Law C. Banking D. Pharmacy

5. Chemistry knowledge helps in environmental conservation because it:

- A. Stops rainfall completely B. Encourages deforestation
 C. Helps control pollution D. Eliminates waste totally

UNIT 2: Laboratory Safety and Apparatus

6. The main reason laboratory rules must be followed is to:

- A. Impress teachers
- B. Avoid accidents and injuries
- C. Save chemicals
- D. Finish experiments quickly

7. Which apparatus is mainly used to measure the volume of a liquid?

- A. Thermometer
- B. Balance
- C. Measuring cylinder
- D. Spatula

8. What type of flame is best for heating substances in the laboratory?

- A. Yellow luminous flame
- B. Candle flame
- C. Non-luminous flame
- D. Smoky flame

9. In case acid spills on the skin, the first action should be to:

- A. Apply oil
- B. Cover with cloth
- C. Scratch the area
- D. Wash with plenty of water

10. A test tube should be held with a holder when heating to:

- A. Make heating faster
- B. Avoid breaking it
- C. Prevent burns
- D. Increase accuracy

UNIT 3: States and Changes of State of Matter

11. Matter is defined as anything that:

- A. Has colour
- B. Occupies space and has mass
- C. Can flow
- D. Can change shape

12. Which of the following is a gas?

- A. Salt
- B. Milk
- C. Chalk
- D. Oxygen

13. The change of liquid water into water vapour is called:

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

14. Which change involves formation of a new substance?

- A. Melting ice
- B. Boiling water
- C. Burning wood
- D. Freezing water

15. According to kinetic theory, particles of a gas:

- A. Are closely packed
- B. Do not move
- C. Vibrate only
- D. Move freely in all directions

UNIT 4: Pure Substances and Mixtures

16. A pure substance is one that:

- A. Can be separated physically
- B. Has identical components
- C. Always exists as a liquid
- D. Is colourful

17. Which is an example of a homogeneous mixture?

- A. Sand and water
- B. Oil and water
- C. Well-stirred salt solution
- D. Soil

18. Filtration is best used to separate:

- A. Two liquids
- B. An insoluble solid from a liquid
- C. Two gases
- D. Salt from water

19. Which method is suitable for separating ink into different colours?

- A. Filtration
- B. Distillation
- C. Magnetic separation
- D. Paper chromatography

20. The solid left on filter paper after filtration is called:

- A. Filtrate B. Distillate C. Residue D. Solvent

UNIT 5: Atoms, Elements and Compounds

21. The smallest particle of an element that retains its properties is an:

- A. Ion B. Molecule C. Compound D. Atom

22. Which sub-atomic particle carries a negative charge?

- A. Proton B. Neutron C. Electron D. Nucleus

23. The atomic number of an element represents the number of:

- A. Neutrons only B. Protons only C. Protons and neutrons D. Electrons and neutrons

24. Atoms of the same element with different mass numbers are called:

- A. Ions B. Molecules C. Isotopes D. Radicals

25. A compound is formed when:

- A. Atoms of the same element mix B. Elements combine chemically
C. Mixtures are heated D. Substances dissolve

UNIT 6: Periodic Table

26. Elements in the same group have the same number of:

- A. Neutrons B. Energy levels C. Valence electrons D. Atomic mass

27. The modern periodic table is arranged according to:

- A. Atomic mass B. Atomic number C. Colour of elements D. Density

28. Alkali metals are found in:

- A. Group 1 B. Group 2 C. Group 17 D. Group 18

29. Non-metals are generally found on which side of the periodic table?

- A. Left B. Middle C. Bottom D. Right

30. The period number of an element shows the number of:

- A. Protons B. Valence electrons C. Energy levels D. Neutrons

UNIT 7: Water and Its Composition

31. Pure water is described as:

- A. Blue and salty B. Colourless and tasteless C. Smelly and acidic D. Bitter and coloured

32. Which substance turns blue anhydrous copper sulphate?

- A. Oil B. Alcohol C. Water D. Air

33. Which process removes microorganisms during water treatment?

- A. Filtration B. Sedimentation C. Coagulation D. Disinfection

34. Rainfall is part of the water cycle called:

- A. Evaporation B. Condensation C. Transpiration D. Precipitation

35. Water is important because it:

- A. Causes corrosion only B. Stops chemical reactions
C. Acts as a universal solvent D. Pollutes the environment

UNIT 8: Air, Composition and Pollution

36. The gas that forms the largest percentage of air is:

- A. Oxygen B. Carbon dioxide C. Nitrogen D. Argon

37. Oxygen is considered the active part of air because it:

- A. Prevents rusting B. Supports combustion C. Is heavier than air D. Causes pollution

38. Air pollution is mainly caused by:

- A. Rainfall B. Breathing
C. Planting trees D. Emission of harmful gases

39. Which gas is responsible for acid rain formation?

- A. Oxygen B. Nitrogen C. Sulphur dioxide D. Argon

40. One way of reducing air pollution is by:

- A. Burning plastics B. Cutting trees C. Using renewable energy D. Increasing fuel use

UNIT 9: Waste Materials

41. Waste materials are substances that are:

- A. Useful always B. Unwanted or discarded C. Expensive D. Colourless

42. Which of the following is biodegradable waste?

- A. Plastic bags B. Glass bottles C. Food leftovers D. Metal scraps

43. Waste gases produced by industries may cause:

- A. Fertile soil B. Acid rain C. Clean air D. Photosynthesis

44. Composting is best used for managing:

- A. Plastic waste B. Metal waste C. Kitchen leftovers D. Glass waste

45. Proper waste management is important because it:

- A. Encourages pollution B. Causes diseases
C. Destroys the environment D. Promotes health and environmental protection

..... End of questionnaire