**NAME: ………………………………… ADM NO: …………. CLASS: ………….**

**FORM ONE CHEMISTRY**

**MIDTERM EXAMS 2023**

**MARKING SCHEME**

1. Define the term Chemistry. (1 mk)

2. State the major differences between the particles of solids and those of gases. (4 mks)

3. The diagram alongside shows a non-luminous Bunsen flame (burner). Study it and answer

 the questions that follow. (3 mks)

Glass tubing

Zone K

Zone L

Zone M

Chimney

 (a) Name the labeled zones based on colour

 **J –**

 **K –**

 **M –**

 (b) Which is the hottest part of the flame? Give a reason for your answer. (2 mks)

 (c) State what would happen if a wooden alighted, splint is placed at the free end of

 the glass tubing. Explain. (2 mks)

 (d) Why is this flame preferred to a luminous flame for heating purposes? (1 mk)

 (e) Should the air hole be open or closed to produce this flame? Explain.(2 mks)

 (f) A match-stick head placed in zone M will not ignite. Explain. (2 mks)

4. Give a reason why a candle flame is not suitable for heating in the laboratory. (2 mks)

5. Besides a bunsen burner flame, name one other apparatus that can be used conveniently

 for heating in the laboratory. (1 mk)

6. Draw and name 4 common apparatus used in a chemistry laboratory. (4 mks)

|  |  |
| --- | --- |
| (a) | (b) |
| (c) | (d) |

7. State five laboratory rules observed in a Chemistry laboratory. (5 mks)

8. Identify the processes involved in the diagram below. (2 mks)

**SOLID**

**LIQUID**

**B**

**A**

C

D

**GAS**

 A – (½ mk)

 B – (½ mk)

 C – (½ mk)

 D - (½ mk)

9. Name one career opportunity in Chemistry. (1 mk)

10. (a) What is drug abuse? (1 mk)

 (b) What is a drug? (1 mk)

11. Explain why most laboratory apparatus are made of glass. (2 mks)

12. State four applications of paper chromatography. (4 mks)

13. The diagram below shows chromatograms for the different dyes

a) Name the techniques used to separate the dyes (1mk)

b) What conditions are required to separate the chromatograms present in a dye? (2mks)

c) What is meant by the term solvent front? Indicate the position in the diagram (1mk)

d) Which letters represent? (1mk)

i) Baseline (origin)\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii) Solvent path\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e) Which chromatographs were present in dye E? (1mk)

f) Which dye is insoluble? (1/2mk)

g) Which dye is pure? Explain (1mk)

h) Which chromatogram is most soluble (1/2 mk)

14. Name two industrial application of chromatography (2mks)

15. Explain how oil would be obtained from peanuts (2mks)