**Name**: …………………………………………………………. **Adm** **no**: ……………….

**School**: ……………………………………………………….. **Class**: …………………..

**Signature**: …………………………………… Da**te**: …………………...

**CHEMISTRY**

**FORM 1**

**COMPREHENSIVE PAPER**

**TIME: 1 ½ HOURS**

**FORM 1 TERM 1 OPENER (ENTRY) 2024 EXAMS**

**THE TOP SCHOOLS MULTILATERAL SERIES 1**

1. Define the term Chemistry. (1 mk)

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

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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)

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

 the glass tubing. Explain. (2 mks)

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

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

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

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

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

 for heating in the laboratory. (1 mk)

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

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

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

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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)

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

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

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

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

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13. The diagram below shows chromatograms for the different dyes

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

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

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

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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)

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

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

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

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

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