CHEMISTRY DEPARTMENT 2023
S.4 BRAINSTORMING TEST
TOPIC; CHLORINE AND ITS COMPOUNDS

NAME……**INDEX number**……..……

Signature …… **STREAM**……

Instructions; Attempt *all questions in this paper.*

1.(a) Damp blue litmus paper was dropped in a gas jar containing chlorine. State what was observed and explain your observation.

Observation (01mark)

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Explanation (03½ marks)

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(b) A boiling tube filled with chlorine water was inverted into a beaker containing chlorine water and the mixture exposed to sunlight for some time

(i) State what was observed (01 mark)

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(ii) Explain with the aid of equation(s) your observation(s) in b(i) (04 marks)

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(c) State what would be observed if chlorine was bubbled through each of the following and in each case write an equation for the reaction.

(i) Cold dilute potassium hydroxide solution

Observation (01 mark)

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Equation (01½ marks)

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(ii)Hot concentrated potassium hydroxide solution

Observation (01 mark)

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Equation (01½ marks)

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(iii) Potassium bromide solution (01 mark)

Observation

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Equation (01½ marks)

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(iv) Potassium iodide solution

Observation (01 mark)

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Equation (01½ marks)

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(v) Solution of iron(II) ions

Observation (01 mark)

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Equation (01½ marks)

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(vi) Burning magnesium was lowered into a gas jar of chlorine

Observation (01 mark)

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Equation (01½ marks)

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(vii) A gas jar of hydrogen sulphide

Observation (01 mark)

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Equation (01½ marks)

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2.(a) State the conditions under which each of the following can react with chlorine gas and write an equation in each case.

(i)Iron wire (02 marks)

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(ii)Sulphur (02 marks)

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(iii)Turpentine (02 marks)

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(e) Briefly describe a test you would carry out to confirm the presence of chloride ion in solution. (02 marks)

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(c) State one use of chlorine (0½ mark)

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(f) Describe the laboratory preparation of a pure dry sample of chlorine gas from manganese(iv) oxide powder (6 marks)

END.