

541/1
CHEMISTRY
(Theory)
Paper 1
August 2021
1 hour

EDIFY E-CLASSES PILOT PROGRAM
SENIOR THREE END OF MONTH E-LEARNING ASSESSMENT
CHEMISTRY
(THEORY)
Paper 1
1 hour

INSTRUCTIONS TO CANDIDATES:
Attempt all the numbers.

1 (a) With the help of a well labelled diagram describe how a pure dry sample of chlorine can be prepared in the laboratory starting from manganese(IV) oxide.

(your description must include conditions and equation for the reaction).

(07 marks)

(b) State what would be observed and write equation(s) for the reaction(s) that would occur if

- i. Chlorine was bubbled into an aqueous sodium hydroxide. (02 marks)
- ii. Burning magnesium was lowered into a jar of dry chlorine. (03 marks)
- iii. Chlorine was passed through a solution of potassium iodide. (2 ½ marks)

(c) State **one** use of chlorine. (½ mark)

2 (a) Write equation to show how hydrogen chloride can be prepared from sodium chloride. (01 ½ mks)

(b) Draw a labelled diagram to show how aqueous hydrogen chloride can be prepared in the laboratory. (03 ½ mks)

(c) State what would be observed and write equation for the reaction that would take place when aqueous hydrogen chloride is reacted with:

(i) Solid calcium carbonate. (02 mks)

(ii) Silver nitrate solution. (02 mks)

(iii) Magnesium. (02 mks)

(d) State why aqueous hydrogen chloride does **not** react with copper. (01 mk)

(e) State two physical properties of chlorine. (02 mks)

END