

Name.....

Index No...../.....

School.....

Date

Candidate's Signature.....

233/1

CHEMISTRY

Paper 1

JULY/AUGUST 2012

Time: 2 HOURS

MARAKWET WEST DISTRICT JOINT EVALUATION TEST (MAWESSE) – 2012

Kenya Certificate of Secondary Education (K.C.S.E)

233/1

CHEMISTRY

Paper 1

JULY/AUGUST 2012

Time: 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Write your name and index numbers in the space provided above.
2. Sign and write the date of examination in the space provided above.
3. Answer all the questions in the spaces provided in the question paper.
4. Mathematics tables and silent electronic calculators may be used.
5. All working **MUST** be clearly shown where necessary.
6. This paper consists of 12 printed pages. Candidates should confirm the 12 printed pages are there.

FOR EXAMINER'S USE ONLY

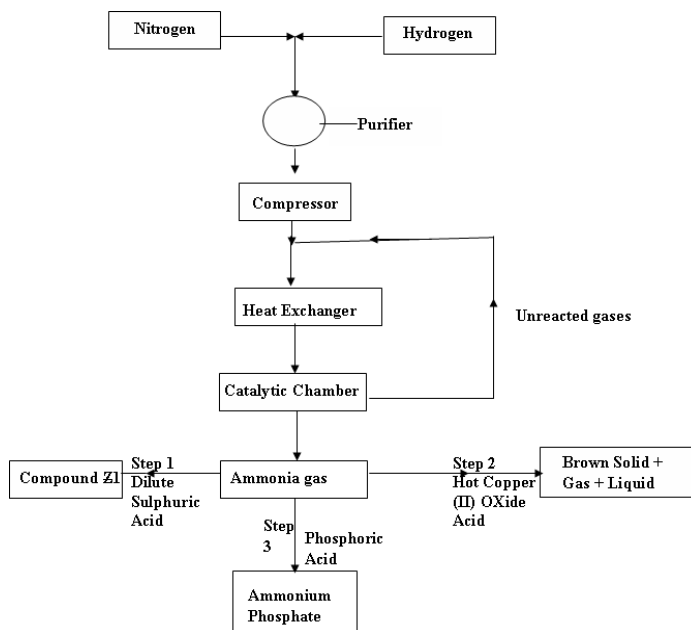
Question	Maximum score	Candidate's Score
1	12	
2	11	
3	12	
4	11	
5	12	
6	10	
7	12	
Total Score	80	

*This paper consists of 12 printed pages.
Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing*

1. The grid below shows a section of the periodic table. The letters do not represent the actual symbols of the elements. Study it and answer the questions that follow.

X					A	
			Y	D	R	B
F						C

- a) What is the general name given to the group in which elements A and B belong? (1mks)
- b) Identify the elements which:
- Forms a divalent anion. (1mk)
 - Is the most electronegative. (1mk)
- c) Explain why element E has higher ionization energy than element F (1mk)
- d) i) Write the formula of the chloride of Z (1mk)
 ii) What type of bonding exists in the chloride of Z? Explain (1mk)
- e) Explain why element x forms compounds in which its oxidation state is either +1 or -1 (Atomic number of x is 1)
- f) State and explain how the atomic radii of element Z and Y compare. (2mk)
- g) A chloride of D produces fumes when exposed to the air.
- Identify the fumes (1mk)
 - Write an equation for the reaction that takes place to produce the fumes. (1mk)
2. Study the flow chart below and answer the questions that follow.



- Give one source of nitrogen gas (1mk)
 - Give the name of compound Z (1mk)
 - Write an equation for the formation of the brown solid. (1mk)
- Why is it necessary to compress nitrogen and hydrogen in this process? (2mk)
- The catalyst used in this process is finely divided iron impregnated with aluminium oxide. What is the function of aluminium oxide? (1mk)
- The equation in the catalytic chamber is;

$$\text{N}_{1(g)} + 3\text{H}_{2(g)} \rightleftharpoons 2\text{NH}_{3(g)} \quad \Delta H = -92 \text{ KJ Mol}^{-1}$$

Explain

- The effect