

FORM 1 TERM 1 2021 CHEMISTRY

INSTRUCTIONS

Answer all questions in the spaces provided.

1. a) What are acid – base indicators. (1mk)

b) Solutions are classified as strongly basic, weakly basic, neutral, weakly acidic or strongly acidic. The information below gives solutions and their pH values. Study it and answer the questions that follow.

Solution	pH values	Classifications
U	14	
V	6	
W	9	
X	2	

Which of the solution could be?

i) Dilute nitric (v) acid. (1mk)

ii) Wood ash extract. (1mk)

iii) Sodium Hydroxide. (1mk)

iv) Rain water in an industrial polluted region. (1mk)

v) What is the name given when solution U react with solution X. (1mk)

c) Sate three examples of acid-base indicators and state the colors they show in acid and basic solutions.

(4 ½ mks)

Indicator	Color of indicator in	
	Acid	Base
i)		
ii)		
iii)		

d) State the advantage of universal indicator over other acid-base indicator. (½ mk)

2. a) State the effects of adding impurity to the melting and boiling points of water. (1mk)

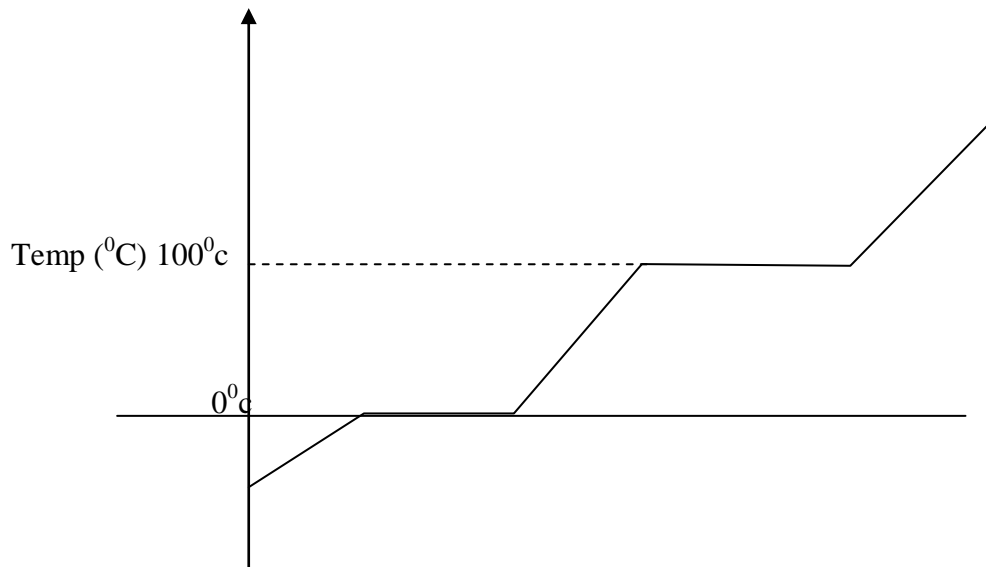
b) State one application of adding impurities on substances. (1mk)

c) Write the chemicals symbols of the following elements and their Latin names. (5mks)

Element	Latin name	Symbol
i) Potassium		
ii) Silver		
iii) Iron		
iv) Copper		
v) Mercury		

3. a) Copper (II) oxide was contaminated with iodine crystals. Describe how iodine can be obtained from the mixture. (2mks)

b) Below is a heating curve for ice until it formed steam. Use it to answer the questions.



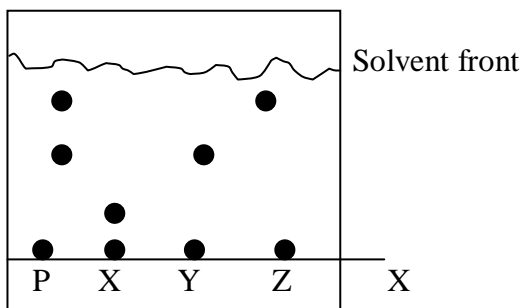
On the same axis, plot the curve that would be obtained if ice was contaminated with Sodium Chloride. (1mk)

4. a) State 4 differences between luminous and non-luminous flame. (4mks)

Luminous	Non-luminous
i)	
ii)	
iii)	
iv)	

b) List two laboratory rules. (2mks)

c) Chromatograph below represents the results of an experiment done with certain plant pigments. Study it and answer a question that follows.



i) Name the part labeled X. (1mk)

ii) Which two pigments is the component of P. (1mk)

iii) Which of the pigments x, y and z is the least soluble? (1mk)