

Name: _____
Index Number: _____
Year: _____

RATU NAVU COLLEGE

YEAR 12 TRIAL EXAMINATION 2020

CHEMISTRY

"

ANSWER BOOKLET

**HAND IN THIS ANSWER BOOKLET TO THE SUPERVISOR
BEFORE YOU LEAVE THE EXAMINATION ROOM.**

Mark Gained:

STRAND 1 GENERAL CHEMISTRY

[10 marks]

I	A	B	C	D
2	A	B	C	D

(2 marks)

3. (i) I - Low accuracy and high precision

(1 mark)

II - Low accuracy and low precision

(1 mark)

(ii) Group with best results

(1 mark)

(iii) Reason

(1 mark)

4. Volume of liquid with uncertainty

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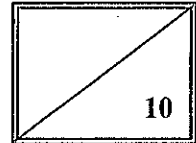
(2 marks)

3.

5. Density in g mL^{-1}

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(2 marks)



STRAND 2 INVESTIGATING MATTER

[20 marks]

1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D

(4 marks)

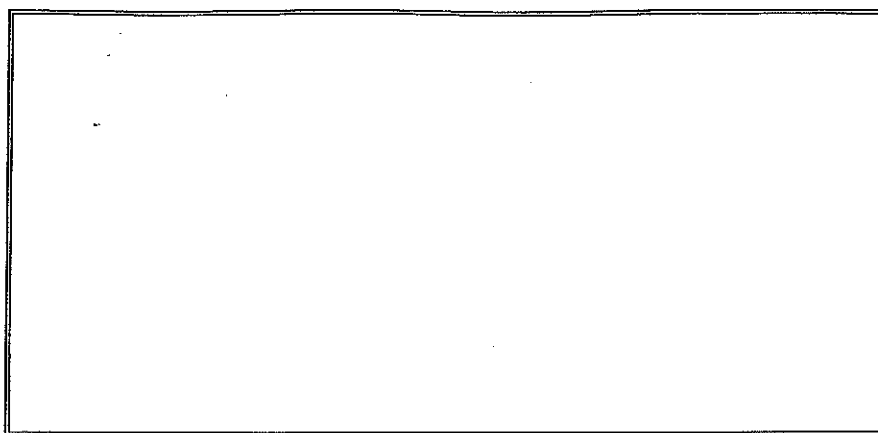
5. Highest to lowest electronegativity

--

(2 marks)

4.

6. Lewis structure of nitrogen trichloride (NCl_3)



(2 marks)

Electron group geometry

(1 mark)

7. Explanation on difference in shape

CO_2 : _____

H_2S : _____

(2 marks)

Turn Over

8. (i) Procedure

(2 marks)

(ii) Observation

(1 mark)

(iii) Reason

(1 mark)

9. Reason

(i)

(1 mark)

(ii)

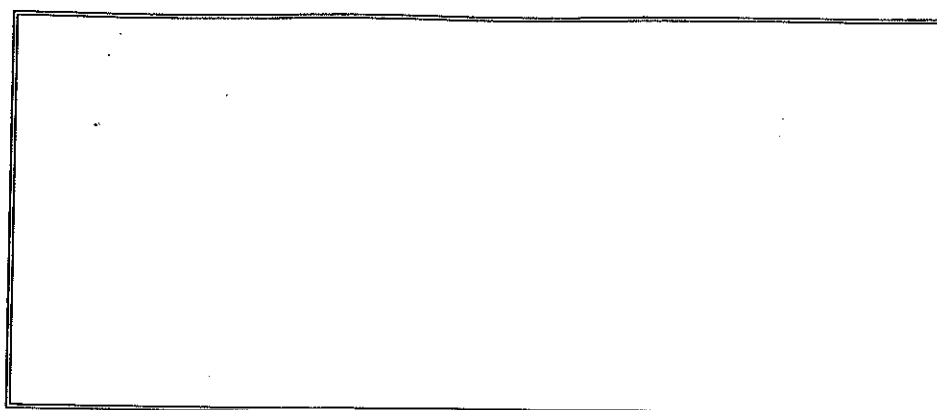
(1 mark)

(iii)

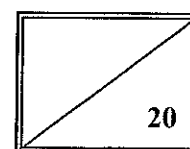
(1 mark)

6.

10. Diagram



(2 marks)



STRAND 3 REACTIONS

[30 marks]

1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
5	A	B	C	D
6	A	B	C	D

(6 marks)

7.

7. (i) Empirical formula

(2 marks)

3

(ii) Molecular formula

(1 mark)

8. Pipette

(1 mark)

Conical flask

(1 mark)

9. (i) Standard solution

(1 mark)

8.

(ii) Amount (in moles) of Na_2CO_3

(1 mark)

(iii) Amount (in moles) of HCl

(1 mark)

(iv) Concentration (in mol L^{-1}) of the HCl solution

(1 mark)

10. (i) Oxidation number

(1 mark)

(ii) Balanced half-equation

(2 marks)

(iii) Oxidation or reduction reaction

(1 mark)

(iv) Role of $\text{SO}_3^{2-}(\text{aq})$

11. (i)

(1 mark)

(ii) Reaction 1, 2 or 3

(1 mark)

(1 mark)

(iii) Reaction 1, 2 or 3

(1 mark)

(iv) Reason

(1 mark)

12. (i) Le Chatelier's principle.

(1 mark)

(ii) Two factors

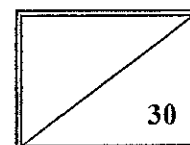
(2 marks)

13. (i) Monoprotic acid

(1 mark)

(ii) pH of a 0.001 mol L⁻¹ HCl solution

(2 marks)

**STRAND 4 Materials****[25 marks]**

1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
5	A	B	C	D

(5 marks)

6. (i) Amphoteric oxide

(1 mark)

11.

(ii) _____

(1 mark)

7.

(2 marks)

8.

(i) Colour

(1 mark)

(ii) Name or formula of the substance X

(1 mark)

9.

Net ionic equation

"

(2 marks)

cg

10.

(i) Test tube 1 or 2

(1 mark)

(ii) Type of reaction

(1 mark)

(iii) Functional group

(1 mark)

12.

(iv) **One conclusion**

(1 mark)

11. **Name**

(2 marks)

12. (i) **Structural isomer or geometrical isomer**

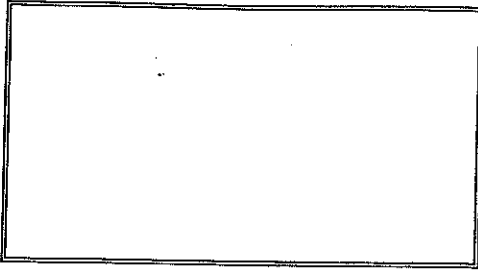
(1 mark)

(ii) **Reason**

(2 marks)

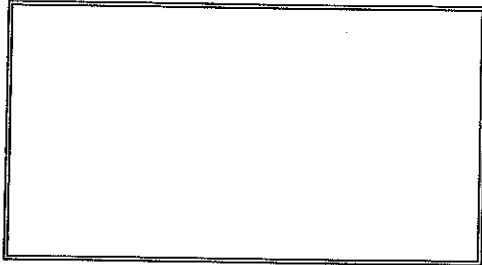
13.

13. (i) Product X



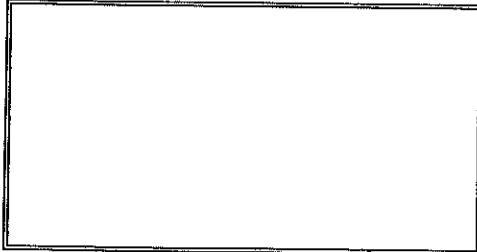
(1 mark)

(ii) Product Y

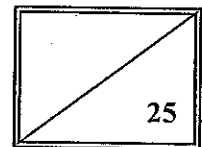


(1 mark)

(iii) Product Z



(1 mark)



STRAND 5 Consumer Chemistry

[15 marks]

1	A	B	C	D
2	A	B	C	D
3	A	B	C	D

(3 marks)

4. (i) Unsaturated fat

(1 mark)

(ii) Glycosidic bond

(1 mark)

(iii) Condensation reaction

(1 mark)

5. (i) _____

(ii) _____

(iii) _____

(iv) _____

(2 marks)

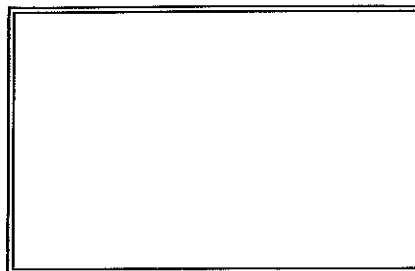
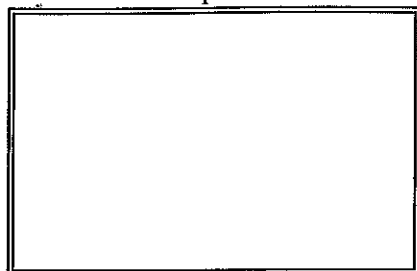
6. (i) _____

_____ (1 mark)

15.

(1 mark)

(ii) Structure of the products



(2 marks)

7. Two examples

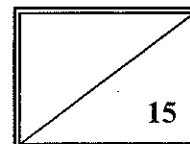
(2 marks)

8. Insecticide

(1 mark)

Herbicide

(1 mark)



THE END