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BA PROVINCIAL FREE BIRD INSTITUTE

ANNUAL EXAMINATION 2020

YEAR 12 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]**

1.	A	B	C	D
2.	A	B	C	D

(2 marks)

3. volume : _____

(2 marks)

4.

a) _____
_____ **(1 mark)**b) _____
_____ **(1 mark)**c) _____
_____ **(1 mark)**5. _____

_____ **(2 marks)**

6. two essential components :

_____ **(1 mark)****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. Lewis structures for SF₂

electron group geometry: _____

(2 marks)

6. electronegativity: _____

(1 mark)

7. Account for the following properties

a) _____

(1 mark)

b) _____

(1 mark)

c) _____

(1 mark)

d) _____

(1 mark)

8. Explanation:

(2 marks)

9.

i. Polarity: _____

(2 marks)

ii. Observations: _____

(2 marks)

iii. Explanation: _____

(1 mark)

10. Differences: _____

(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.

a) ion-electron equation:

(1 mark)

b) function of cryolite :

(1 mark)

c) chemical formula : _____

(1 mark)

chemical name: _____

(1 mark)

d) total mass (amu) of **carbon** in $C_{12}H_{10}O_6$:

(2 marks)

8. moles (3 significant figure)

(2 marks)

9. Empirical formula:

(1 mark)

Molecular formula:

(1 mark)

10. value of x:

(2 marks)

11.

a) Moles: _____
_____ **(1 mark)**

b) Moles: _____
_____ **(1 mark)**

c) concentration in mol/dm³

_____ **(1 mark)**

d) concentration in g/dm³

_____ **(1 mark)**

12.

a) $\text{SO}_2 \rightarrow \text{SO}_4^{2-}$

_____ **(1 mark)**

b) $\text{Cr}_2\text{O}_7^{2-} \rightarrow \text{Cr}^{3+}$

_____ **(1 mark)**

c) _____

_____ (1 mark)

13.

a) _____

_____ (1 mark)

b) _____

_____ (1 mark)

c) _____

_____ (1 mark)

d) _____

_____ (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: _____

II: _____

III: _____

IV: _____

(4 marks)

7.

a) balanced chemical equation

anode : _____

cathode: _____ (2 marks)

b) purpose

Chlorine:

sodium hypochlorite:

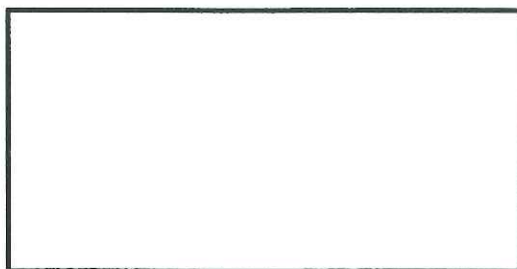
(2 marks)

8. Complete the diagrams for this reaction.



(2 marks)

9. CH₃COOH



(2 marks)

10.

a) equation:

(1 mark)

b) _____

(1 mark)

c) concentrated sulphuric acid:

(1 mark)

11. Name : _____ (1 mark)

12. dehydration of ethanol:

(2 marks)

13. breathalyzer work:

(2 marks)

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. formula : _____ (1 mark)

ii. _____

(1 mark)

iii. _____

(1 mark)

5. main components :

(1 mark)

6. Reason:

(2 marks)

7. Classification

- i. Heroin : _____
- ii. Marijuana : _____
- iii. Cocaine : _____
- iv. Amphetamines: _____

(4 marks)

8. Explanation :

(2 marks)

THE END