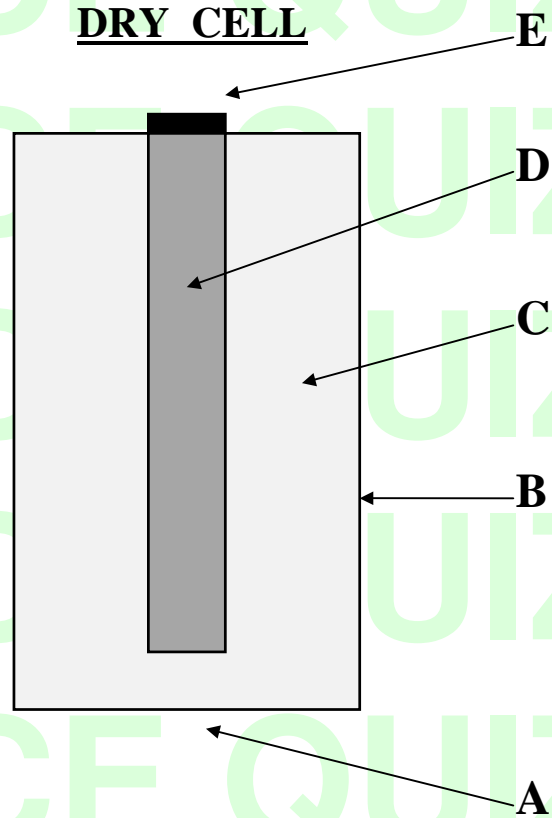


**REDOX PRACTICE QUIZ CHS CHEMISTRY I Mr. D. Scott**  
**MATCHING**

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**DRY CELL**

1. positive terminal
2. oxidized material
3. reduced material
4.  $\text{MnO}_2 + \text{NH}_4\text{Cl}$
5. carbon rod
6. zinc case
7. cathode
8. anode
9. moist paste
10. negative terminal



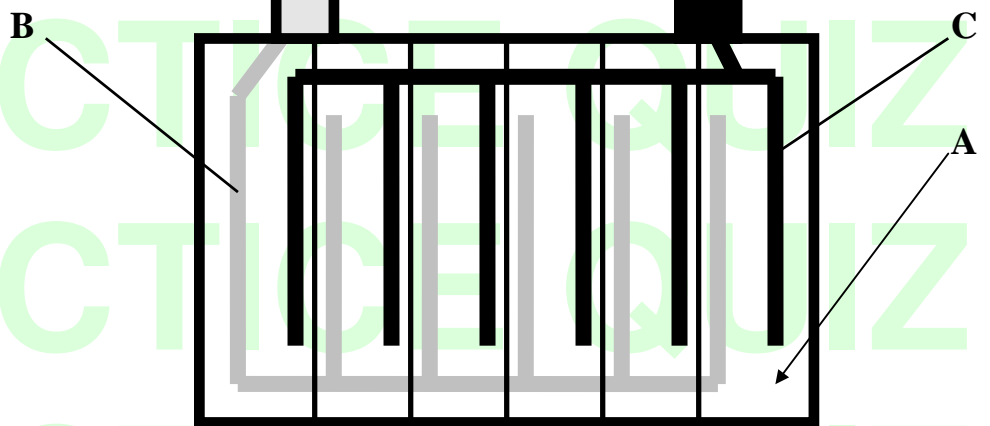
11.  $\text{Pb} + \text{SO}_4^{2-} \rightarrow \text{PbSO}_4 + 2\text{e}^-$
12.  $\text{H}_2\text{SO}_4$

**LEAD ACID BATTERY**

+

-

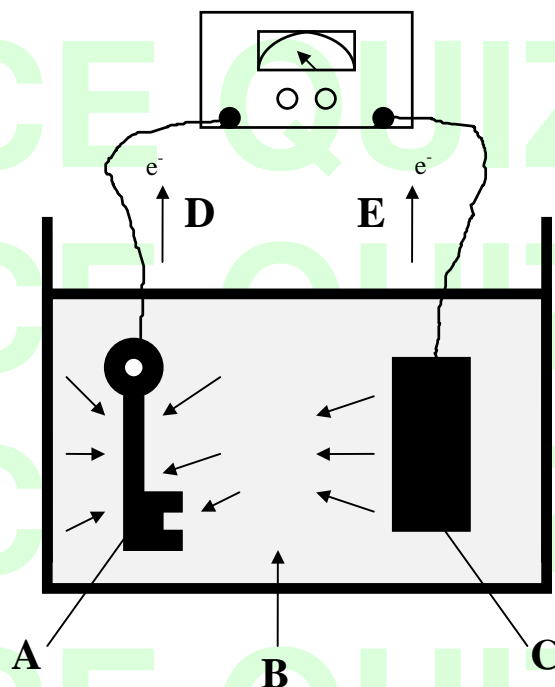
13. cathode
14.  $\text{PbO}_2$
15. oxidation
16. reduction
17. Pb
18. anode



19.  $\text{PbO}_2 + 4\text{H}^+ + \text{SO}_4^{2-} + 2\text{e}^- \rightarrow \text{PbSO}_4 + 2\text{H}_2\text{O}$

Assume that the key is made of copper, the metal plate is made of zinc, and that they are immersed in an aqueous solution.

D.C. Power Source



20. negative

21. positive

22. The CORRECT direction of electron flow (D or E).

23. ions of the plating metal

24. reduction electrode

25. oxidation electrode

26. cathode

27. anode

28. The cell in the diagram above is a (n)

(A) electrolytic cell.

(B) electrorefining cell.

(C) anodizing cell.

(D) electrochemical cell.

(E) voltaic cell.

29. The solution indicated by the letter "B" will

(A) continuously become more concentrated as this cell is used.

(B) gradually become oxidized as this cell is used.

(C) continuously become more dilute as this cell is used.

(D) eventually run out of anions.

(E) remain at the same concentration before, during, and after its use.

30. The chemical reaction taking place in the above cell is

(A) explosive.

(B) not a REDOX reaction.

(C) spontaneous.

(D) nonspontaneous.

(E) not possible.

31. The above cell would be MOST SIMILAR to which of the following?

(A) voltaic cell

(B) fuel cell

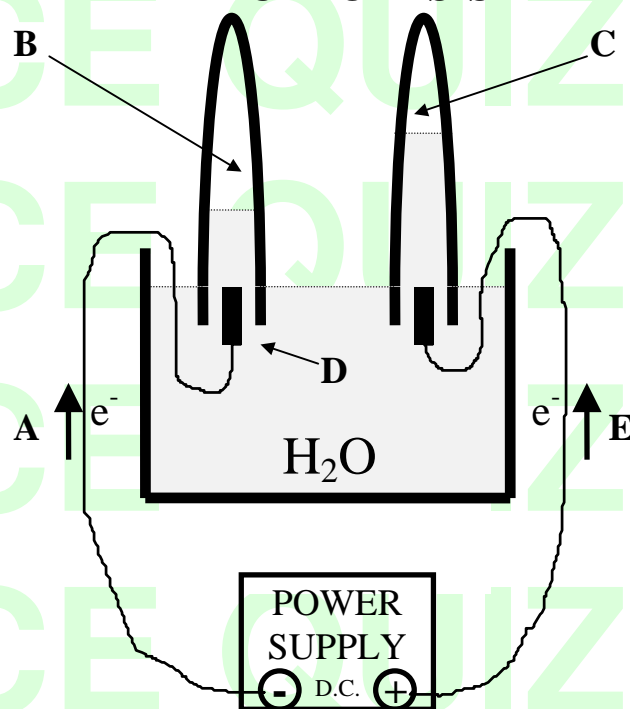
(C) electrolysis cell

(D) dry cell

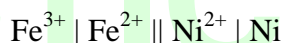
(E) half-cell

## ELECTROLYSIS

32. hydrogen gas
33. oxygen gas
34. gas collected over the cathode
35. gas collected over the anode
36. gas that was oxidized
37. gas that was reduced
38. The CORRECT direction of electron flow (A or E)



39. Calculate the cell potential of an electrical chemical cell consisting of the following:



- (A) 0.52v
- (B) 1.02v
- (C) 0.536v
- (D) 0.214v
- (E) 0.19v

40. Identify the reducing agent in the following reaction:



- (A) Na
- (B) H<sub>2</sub>O
- (C) NaOH
- (D) H<sub>2</sub>
41. The oxidation number of sulfur in each of the following is +6 *except* for:
- (A) SO<sub>3</sub>
- (B) Na<sub>2</sub>SO<sub>4</sub>
- (C) SO<sub>4</sub><sup>2-</sup>
- (D) S<sub>2</sub>O<sub>3</sub><sup>2-</sup>