CHEMISTRY

BOOKS - FULL MARKS CHEMISTRY (TAMIL ENGLISH)

PERIODIC CLASSIFICATION OF ELEMENTS

Exercise Choose The Correct Answer

1. If Dobereiner is related with 'law of triads', then Newlands is related with

A. Modern periodic law

B. Hund's rule

C. Law of octaves

D. Pauli's Exclusion principle

Answer: C

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2. Modern periodic law states that the physical and chemical properties of elements are the periodic functions of their.....

A. atomic numbers

B. atomic masses

C. similarities

D. anomalies

Answer: A

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3. Elements in the modern periodic table are arranged in ..... groups and ..... Periods.

A. 7, 18

B. 18, 7

C. 17, 8

D. 8, 17

Answer: B

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Exercise Fill In The Blanks

1. In Dobereiner's traids, the atomic weight of the middle element in the .....of the atomic masses of 1st and 3rd elements.

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2. Noble gases belong to .....group of the periodic table.

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3. The basis of the classifications proposed by Dobereiner, Newlands and Mendeleev was.....

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4. Example for liquid metal is.....

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Exercise Match The Following

1.

Column I	Column II
1. Triads	(a) Newlands
2. Alkali metal	(b) Calcium
3. Law of octaves	(c) Henry Moseley
4. Alkaline earth metal	(d) Sodium
5. Modern Periodic Law	(e) Dobereiner

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Exercise State Whether True Or False

1. Newlands' periodic table is based on atomic masses of elements and modern periodic table

is based on atomic number of elements

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2. Metals can gain electrons.

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3. Alloys bear the characteristics of both metals and nonmetals.

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4. Lanthanides and actinides are kept at the bottom of the periodic table because they resemble each other but they do not resemble with any other group elements.

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5. Group 17 elements are named as Halogens.

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Exercise Assertion And Reason

1. Statement : Elements in a group generally posses similar properties but elements along a period have different properties.

Reason : The difference in electronic configuration makes the element differ in their chemical proporties along a period.

A. Statement is true and reason explains the statement.

B. Statement is false but the reason is correct

C.

D.

Answer: A

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Exercise Answer The Following

1. State modern periodic law.

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2. What are groups and periods in the mordern periodic table ?

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3. What are the limitations of Mendeleev's periodic table ?

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4. State any five feastures of modern periodic table.

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Activity

1. Find the pair of elements having similar properties by applying Newlands' law of Octaves (Example : Mg & Ca):

Set I : F, Mg, C, O, B

Set II : Al, Si, S, Cl, Ca

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Additional Questions Short Answer Questions

1. Why did the classification of elements evolve ?

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2. What is a triads group ?

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3. Explain law of octaves.

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4. What is a periodic table ?

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5. What is IUPAC ? Where is it located ? Give examples of few elements named by IUPAC.

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6. How are metals classified in the periodic table ?

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7. What are alkali metals ?

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8. Though they are found rare, they have many uses. Justify this statement.

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Additional Questions Long Answer Questions

1. Write any five advantages of modern periodic law.

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2. Explain limitations of Mendelev's periodic table and why is the modern period considered an extension of Mendelev's periodic table.

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3. What are the advantages of alloys ?

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4. Explain the uniqueness of Hydrogen.

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