CHEMISTRY

BOOKS - BEYOND PUBLICATION

CLASSIFICATION OF ELEMENTS THE PERIODIC TABLE

Example

1. Newlands proposed the law of octaves . Mendeleeff suggested eight groups for elements in his table . How do you explain these observations in terms of modern periodic classification ?

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2. Explain the similarities between the Newlands. Mendeleeff and modern periodic table.

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3. Correlate various tables proposed on classification of elements.

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4. What are the limitations of Mendeleev's periodic table ? How could the modern periodic table overcome the

limitations of Mendeleev's table?

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5. Define the mordern periodic law . Discuss the construction of the long form of the periodic table .

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6. Which periodic table is able to explain properties of element?Write its periodic law and explain the table.

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7. What are the salient features of modern periodic table ?

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8. Explain how the elements are classified into S. p .d and f- block elements in the periodic table and give the advantage of this kind of classification .

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9. How does periodic table classified based upon the entering of differentiating electron? Explain that classfication. What is the advantage of such classification?

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10. Write down the characteristics of the elements having atomic number 17. Electronic configuration.....

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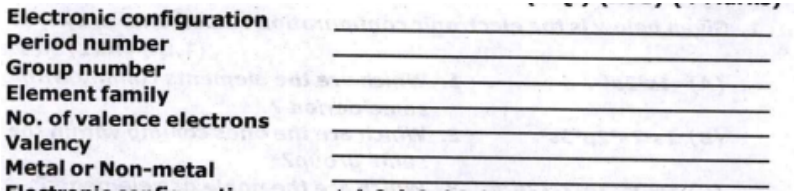
11. Write down the characteristics of the element having atomic number 17.



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12. Write down the characteristics of the elements having atomic number 17. Group number.....

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13. Write down the characteristics of the elements having atomic number 17. Element family.....

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14. Write down the characteristics of the elements having atomic number 17. No.of valence electrons.....

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15. Write down the characteristics of the elements having atomic number 17. Valency.....

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16. Write down the characteristics of the elements having atomic number 17. Metal or non-metal.....

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17. Why was the basis is classificatons of elements changed from the atomic mass to the atomic number ?

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18. Why was the basis is classificatons of elements changed from the atomic mass to the atomic number ?

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19. Which atomic property is more suitable for classification of elements ? Why ?

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20. What is a periodic property? How the following properties vary in a group and in a period? Expain

(a) Atomic radius.

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21. What Is a periodic property ? How do the following properties change in a group and period ? Explain .

Ionization enery

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22. What Is a periodic property ? How do the following properties change in a group and period ? Explain .

Electron affinity

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23. What is a periodic property? How the following properties vary in a group and in a period? Explain

(b) EN.

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24. Explain the ionizaton energy order in the following sets of elements :

Na,Al,Cl

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25. Explain the ionizaton energy order in the following sets of elements :

Li ,Be,B

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26. Explain the ionizaton energy order in the following sets of elements :

C,N,O

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27. Explain the ionizaton energy order in the following sets of elements :

F,Ne ,Na

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28. Explain the ionizaton energy order in the following sets of elements :

Be ,Mg ,Ca

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29. Given below is the electronic configuration of elements A,B,C,D.

$1s^2 2s^2$

Which are the elements coming with in the same period?

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30. Given below is the electronic configuration of element.

$1s^2 2s^2 2p^6 3s^2$.

Which are the elements coming in the same group ?

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31. Given the electronic configuration of element

$1s^2 2s^2 2p^6 3s^2 3p^3$

Which are the elements coming in the same group ?

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32. Given the electronic configuration of elements .

$1s^2 2s^2 2p^6$

To which group and period does the elements belong ?

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33. Elments in a group generally possess similar properties , but elements along a period have different properties .How do you explain this statement ?

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34. Elments in a group generally possess similar properties , but elements along a period have different properties .How do you explain this statement ?

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35. S- block and p - block elements except 18 th group elements are sometimes called as 'Representative elements based on their abundant avilability in the nature . Is it justifed ? Why ?

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36. The electronic configuration of the elements, X, Y and Z are given below. A) X=2, B) Y=2,6, C) Z=2,8,3, Which element belongs to second group?

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37. The electronic configuration of the elements, X, Y and Z are given below. A) X=2, B) Y=2,6, C) Z=2,8,3, Which element belongs to second group?

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38. The electronic configuration of the elements, X, Y and Z are given below. A) X=2, B) Y=2,6, C) Z=2,8,3, Which element belongs to second group?

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39. Identify the element that has the larger atomic radius in the given pair of elements and mark it with a symbol.

Mg or Ca

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40. Identify the element that has the larger atomic radius in each pair of the following and mark it with a symbol.

Li or Cs

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41. Identify the element that has the larger atomic radius in each pair of the following and mark it with a symbol.

N or P

Watch Video Solution

42. Identify the element that has the larger atomic radius in each pair of the following and mark it with a symbol.

B or Al.

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43. Identify the element that has the lower ionization energy in each pair of the following and mark it with a symbol.

Mg or Na

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44. Identify the element that has the lower ionization energy in each pair of the following and mark it with a symbol.

Li or O

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45. Identify the element that has the lower ionization energy in each pair of the following and mark it with a symbol.

Br or F

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46. Identify the element that has the lower ionization energy in each pair of the following and mark it with a symbol.

K or Br

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47. How does metallic character change when we move Down a group ?

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48. How does metallic character change when we move Across a period ?

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49. Name two elements that you would expect to have chemical properties similar to Mg . What is the basis for your choice ?

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50. On the basis of atomic numbers predict to which block the elements with atomic number 9 , 37 ,46 and 64 belongs to ?

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51. On the basis of atomic numbers predict to which block the elements with atomic number 9 , 37 ,46 and 64 belongs to ?

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52. Using the periodic table , predict the formula of compound formed between element x group 13 and another element Y of group 16 .

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53. An element X belongs to 3 rd period and Group 2 of the periodic table . State (a) The no . Of valence electrons

(b) The valency (c) Whether it is metal or a non- metal

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54. An element has atomic number 19. where would you expect this element in the periodic table and Why ?

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55. How do you appreciate the role of electronic configuration of the atoms of elements in periodic classification ?

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56. Explain the construction of periods in Modern periodic table.

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57. How do you appreciate the Planck?

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58. Without knowning the electronic configurations of the above of the atoms of elements Mendeleeff still Could arrange the elements nearly close to the arrangements in the modern periodic table . How can you appreciate this ?

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59. How can you appreciate Mendeleeff in arrangement of elements with electronic configuration ?

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60. Comment on the position of hydrogen in periodic table .

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61. How do the positions of elements in the periodic table help you to predict its chemical properties ? Explain with and example .

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62. In period 2 element X is to the right of element Y . Then , find which of the element have :

Low nuclear charge

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63. In period 2 element X is to the right of element Y . Then , find which of the element have :

Low atomic size

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64. In period 2 element X is to the right of element Y .

Then , find which of the element have :

High ionization energy

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65. In period 2 element X is to the right of element Y .

Then , find which of the element have :

High electronegativity

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66. In period 2 element X is to the right of element Y .

Then , find which of the element have :

More metallic character

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67. Aluminium does not react with water at room temperature but reacts with both dil . Hcl and NaOH solutions . Verify these statements experimentally . Write your observation with chemiscal equation , From these observations , can we concluds that Al is a metalloid ?

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68. How can you explain Aluminium (Al) is a metalloid with chemical equations ?

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69. Collect the information about reactivity of VIIA group elements (noble gases) from internet or from your school liberary and prepare a report in their special character when compared to other elements of periodic table .

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70. Collect information regarding metallic character of elements of IA group and propare report to support the idea of metallic character increases in a group as we move from top to bottom .

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71. Observe the following table and Fill it .

Group	Elements and their Atomic weight			Arithmetic mean 1st and 3rd elements Atomic weight
A	Lithium (Li) 7.0	Sodium (Na) 23.0	Potassium (K) 39.0	$\frac{7.0+39.0}{2} = 23.0 = 23$
B	Calcium (Ca) 40.0	Strontium(Sr) 87.5	Barium (Ba) 137.0	$\frac{40+137}{2} = 88.5 \simeq 87.5$
C	Chlorine (Cl) 35.5	Bromine (Br) 80.0	Iodine (I) 127.0	$\frac{35.5+127.0}{2} = 81.25 \simeq 80$
D	Sulphur (S) 32.0	Selenium (Se) 78.0	Tellurium (Te) 125.0	$\frac{32+125}{2} = 78.5 \simeq 78$
E	Manganese(Mn) 55.0	Chromium(Cr) 52.0	Iron (Fe) 56.0	$\frac{55.0+56.0}{2} = 55.5 \simeq 52$

Observations :

Can you establish the same relationship with the set of elements given in the remaining rows ?

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72. Observe the following table and Fill it .

Group	Elements and their Atomic weight			Arithmetic mean of 1st and 3rd elements Atomic weight
A	Lithium (Li) 7.0	Sodium (Na) 23.0	Potassium (K) 39.0	$\frac{7.0+39.0}{2} = 23.0 = 23$
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Observations :

Find average atomic weights of the first and third elements in each row and compare it with the atomic weight of the middle element.

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73. Describe an activity to observe the reaction of metal oxides with acids. What do you observe ?

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74. What is atomic number? Write its significance.

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75. Consider the following elements of third period of modern periodic table :

Period III elements	Na	Mg	Al	Si	P	S	Cl	Ne
Atomic number	11	12	13	14	15	16	17	18

How does valency very in a period on going from left to right ?

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76. How does the valency vary on going down a group ?

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77. DO the atom of an element and its ion have same size ?

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78. Which one between Na and Na^+ would have more size ?

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79. Which one between Cl and Cl^- would have more size ? Why ?

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80. Which one in each of the following pairs is larger in size ?

Na, Al

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81. Which one in each of the following pairs is larger in size ?

$Na, Mg^{+}2$

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82. Which one in each of the following pairs is larger in size? S^{2-},Cl^{-}.

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83. Which one in each of the following pairs is larger in size ? $Fe^{2}+'$, $Fe^{3}+$

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84. Which one in each of the following pairs is larger in size? C^{4-} ,F^{-} .

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85. Observe the following table and Fill it .

Group	Elements and their Atomic weight			Arithmetic mean 1st and 3rd elements Atomic weight
A	Lithium (Li) 7.0	Sodium (Na) 23.0	Potassium (K) 39.0	$\frac{7.0+39.0}{2}$ = 23.0 = 23
B	Calcium (Ca) 40.0	Strontium(Sr) 87.5	Barium (Ba) 137.0	$\frac{40+137}{2}$ = 88.5 ≃ 87.5
C	Chlorine (Cl) 35.5	Bromine (Br) 80.0	Iodine (I) 127.0	$\frac{35.5+127.0}{2}$ = 81.25 ≃ 80
D	Sulphur (S) 32.0	Selenium (Se) 78.0	Tellurium (Te) 125.0	$\frac{32+125}{2}$ = 78.5 ≃ 78
E	Manganese(Mn) 55.0	Chromium(Cr) 52.0	Iron (Fe) 56.0	$\frac{55.0+56.0}{2}$ = 55.5 ≃ 52

Observations :

Can you establish the same relationship with the set of elements given in the remaining rows ?

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86. Observe the following table and Fill it .

Group	Elements and their Atomic weight			Arithmetic mean of 1st and 3rd elements Atomic weight
A	Lithium (Li) 7.0	Sodium (Na) 23.0	Potassium (K) 39.0	$\frac{7.0+39.0}{2} = 23.0 = 23$
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Observations :

Find average atomic weights of the first and third elements in each row and compare it with the atomic weight of the middle element.

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87. Describe an activity to observe the reaction of metal oxides with acids. What do you observe ?

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88. Some main group elements of s-block and p-block have family names as given in the following table. Observe the long from of a periodic table and complete the table with proper information.

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89. Find out the valencies of first 20 elements.

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90. Consider the following elements of third period of modern periodic table :

Period III elements	Na	Mg	Al	Si	P	S	Cl	Ne
Atomic number	11	12	13	14	15	16	17	18

How does valency very in a period on going from left to right ?

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91. How does the valency vary on going down a group ?

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Watch Video Solution

92. What relation about elements did dobereiner want to establish ?

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93. The densities of calcium (ca) and barium (Ba) are 1.55 and 3.51 g cm^{-3} respectively based on Dobereiner's law of triads , can you give the approximate density of strotium (Sr) ?

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94. Do you know why Newlands proposed the law of octaves ? Explain your answer in terms of the modern structure of the atom .

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95. Do you think Newland's law of octaves is correct ? Justify .

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96. Why did Mendeleeff had to leave certain blank spaces in his periodic table ? What is your explanation for this ?

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97. What is your understanding about Ea_2O_3, EsO_2 ?

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98. All akali metals are solids but hydrogen is a gas with diatomic molecules . Do you justify the inclusion of hydrogen in first group with alkali metals ?

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99. Why are lanthanides and actinides placed separately at the bottom of the periodic table ?

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100. IF lanthanides and actinides are inserted within the table . Imagine how the table would be ?

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101. Second ionization energy of an element is higher than its first ionization energy Why ?

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102. The calculated electron gain enthaly values for alkaline earth metals and noble gases are positive . How

can you explain this ?

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103. The second period element , for example , for example 'F' has less electron gain enthyalpy than the third period element of the same group of example'Cl' . Why ?

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104. On which side of the periodic table do you find (i) Metals (ii) Non-metals ?

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105. How does tendency to gain electrons vary as we move down the group ?

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106. What are the limitations of Dobereiner's law to triads ?

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107. What is Mendeleeffs periodic law?

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108. Write modern periodic law .

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109. "Be" differs from rest of the elements of the IIA group due to

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110. Nitrogen (Z=7) is the element of group V of the periodic table. Which of the following is the atomic number of the next element in the group ?

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111. Lanthanoids are

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112. What are actioniods ?

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113. Define valaency .

Watch Video Solution

114. Unit of atomic radius :

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115. The unit for ionisation energy is

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116. Write the formula proposed by Mulliken to measure electronegativity.

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117. What is Dobereiner triad ? Give two example to it.

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118. Do you think Newland's law of octaves is correct ? Justify .

Watch Video Solution

119. What is Mendeleeffs periodic law?

Watch Video Solution

120. What is valency?

Watch Video Solution

121. Write modern periodic law .

Watch Video Solution

122. What is the name given to I (A) group elements ?

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123. What are halogens ?

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124. What are noble gases ?

Watch Video Solution

125. What are lanthanides and actinides? Where are they located in the long from of the periodic table?

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126. What are Actinides ?

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127. What are metals and non – metals ?

Watch Video Solution

128. What are metalloids ?

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129. What is electronegativity?

Watch Video Solution

130. What is electropositive character ?

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131. Which group elements are called Boron family ?

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132. What do you know from Dobereiner's triads ?

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133. What are the properties of isolated atoms of elements ?

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134. Why the second lonization energy is more than the first ionization energy for any element ?

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135. Name the first and last elements of Lanthanides.

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136. Name the first and last elements of Actinides.

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137. Besides gallium, which other elements have since been discovered that were left by Mendeleev's in his Periodic Table ? (any two)

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138. In the Modern Periodic Table, which are the metals among the first ten elements ?

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139. Give the name and electronic configuration of third alkali metal.

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140. What is the similarity in the electronic configuration of Mg Ca and Sr ?

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141. Write the elements in the ascending order of their atomic radii

2nd period elements	B	Be	0	N	Li	C
Atomic radii	88	111	66	74	152	77

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142. Did Dobereiner's traids also exist in the columns of Newlands's Octaves ? Compare and find out.

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143. If an element X is placed in group 14, what will be formula and the nature of bonding of its chloride ?

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144. Are zero group elements and VIII group elements are same ?

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145. The inner transition elements are ___ elements.

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146. Which pair of elements belongs to the same group ? (atomic numbers are given)

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147. Atomic radius of hydrogen is 37 pm. Express the same in metres.

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148. The formula of a metal oxide Is MO. Then write the formula of its chloride.

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149. The electronic configuration of an element is 2,8,6. Identify the element and name of the family to which it belongs.

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150. How do metallic and non-metallic charcters vary in a group and period ?

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151. Give example where the electronic configuration of an element does not justify its inclusion in a block of element.

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152. How many elements are present in IIIB group of the long form of the periodic table ?

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153. What do you mean by screening effect ?

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154. Arrange the elements B, N, Be and O in the increasing order of their ionization potentials.

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155. What is meant by first ionization energy ?

Watch Video Solution

156. What is meant by second ionization energy ?

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157. Give the outer orbits general electronic configuration of the following types of elements . (a) Noble gases

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158. Give the outer orbit general electronic configuration of

(b) Representative elements

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159. Give the outer orbits general electronic configuration of the following types of elements .(c) Transition elements

Watch Video Solution

160. Give the outer orbits general electronic configuration of the following types of elements . (d) Inner transition elements .

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161. What is a triad?

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162. Chlorine bromine , iodine are Dobereiner's triads .How do you justify ?

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163. Why are lanthanides and actinides placed separately at the bottom of the periodic table ?

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164. Second ionization energy of an element is higher than its first ionization energy Why ?

Watch Video Solution

165. What is screening effect? How is it related to IE?

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166. What is electronegativity ? What are various methods used to determine electro- negativity ? Explain.

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167. Explain the limiation of Mendeeff's periodic table .

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168. How are the elements divided into s, p, d and f – blocks in the Modern periodic table ?

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169. Why did Mendeleeff had to leave certain blank spaces in his periodic table ? What is your explanation for this ?

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170. An element has atomic number 19. Where would you expect this element in the period table and why ?

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171. Differentiate the metals and non – metals.

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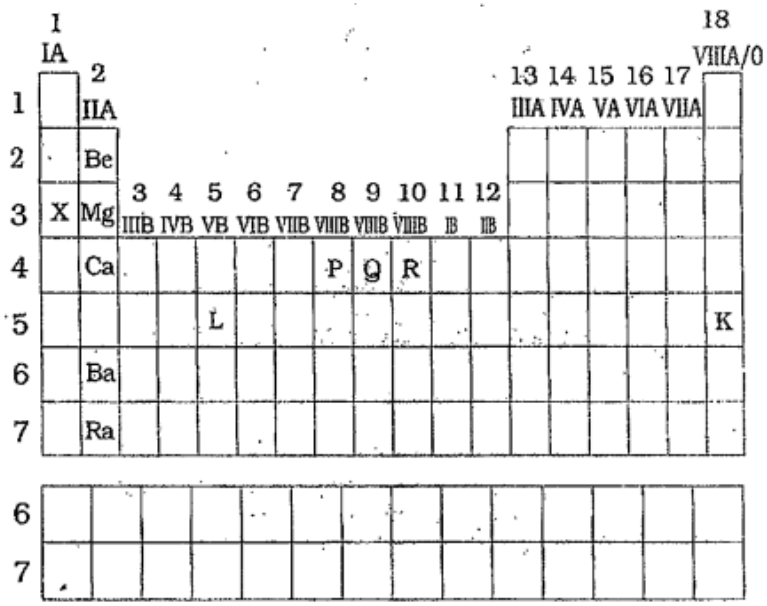
172.



Write the name and oxidation state of X.

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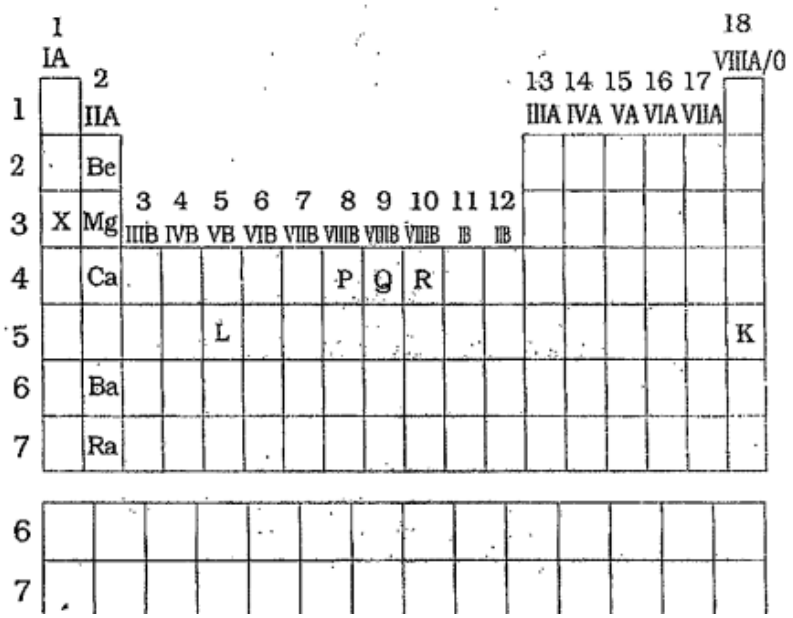
173.



Which elements are in same period and same group ?

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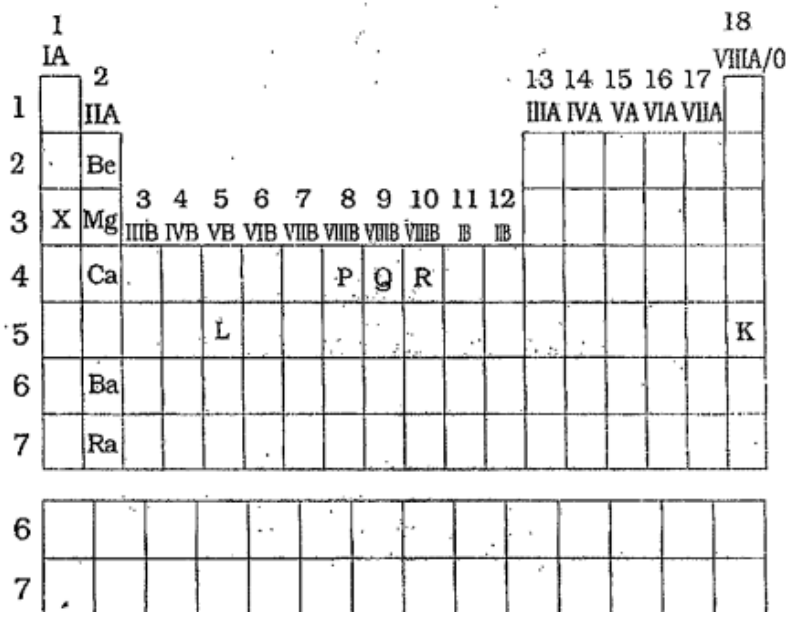
174.



What is the missing element in IIA group ?

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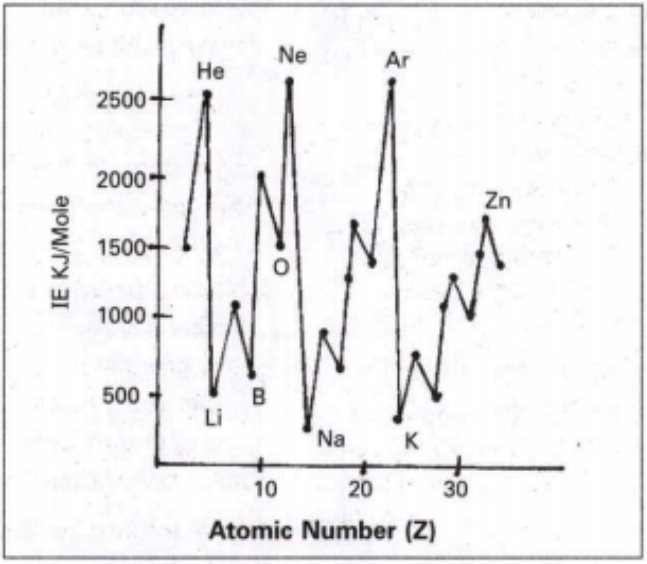
175. Ionization potential curve is the graph of atomic number versus ionization energy in KJ/Moie. The IP curve is given for elements upto Z = 30.

In the graph identify the representative elements with the highest and lowest IP values.



A. 1. He, K

B. 2. Li, Ar

C. 3. K, He

D. 4. Zn, Ar

Answer:

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176. Give reason for the need of classification of element .

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177. Do you think Newland's law of octaves is correct ? Justify .

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178. The second period element 'F' has electrons gain enthaly than the third period elements of same group 'Cl ' .Why ?

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179. x,y and z are the elements of a Dobereiner 's tried .If the atomic mass of $'x'$ is 7 and that of 'z' in 39. what should be the atomic mass of the 'y' ?

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180. What changes do you observe in the metallic properties of the elements when moved from left to right?

Li	Be	B	C	N	O	F
Na	Mg	Al	Si	P	S	Cl

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181. Why were Dobereiner , Newlands and Mendeleeff not 100 % successful in their classfication of elements ? Why is the modern table table relatively a better classification ? Predict the reason .

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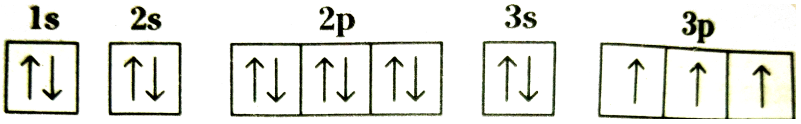
182. Observe the electronic condigurations given below and write the group and period numbers of those elements .



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183. The Atomic number of an element is 35 where would you expect the position of this element in the periodic table ? Why ?

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184. Between a neutral atom and its cations which has bigger size ? Why?

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185. Explain the salient features and achievements of the Mendeleeff's periodic tble.

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186. Explain the construction of periods in Modern periodic table.

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187. Define ionization energy.Explain on which the ionization energy depends on .

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188. What is the need to classify elements ?

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189. The electrons configuration of atom A is 2,8,6

What is the atomic number of element A ?

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190. The electrons configuration of atom A is 2,8,6

stable whether the atomic size of element A is bigger or smaller than the atom having atomic number 14 . Why ?

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191. The electrons configuration of atom A is 2,8,6

Which of the elements exhibits similarity in chemical properties as elements A O(8) ,C (6) ,N (7) ,AR (18) .Why ?

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192. The electrons configuration of atom A is 2,8,6

How the element is formed inert gas configuration ?

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193. Write the elements in the ascending order of their atomic radii

2nd period elements	B	Be	0	N	Li	C
Atomic radii	88	111	66	74	152	77

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194. Which of the 2nd period elements closer to the configuration of inert gas?

2nd period elements	B	Be	0	N	Li	C
Atomic radii	88	111	66	74	152	77

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195. Some elements belonging to second period of periodic table , and their atomic radii are given below .Observe them and write answers .

2^{nd} period elements	B	Be	O	N	Li	C
Atomic radii	88	111	66	74	152	77

which is the outermost orbit of alll these elements ?

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196. Mendeleeff classified the known 63 elements in the form of a periodic table. Mention any two things that benefitted study of chemistry, to support above statement.

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197. Two elements X and Y belong to Groups 1 and 2 respectively in the same period of the periodic Table .Compare these elements with respect to :

Number of electrons in their outermost orbit .

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198. Two elements X and Y belong to Groups 1 and 2 respectively in the same period of the periodic Table .Compare these elements with respect to :

Their atomic size and their valancies .

Watch Video Solution

199. Two elements X and Y belong to Groups 1 and 2 respectively in the same period of the periodic Table .Compare these elements with respect to :

their ionisation energy and metallic character .

Watch Video Solution

200. Two elements X and Y belong to Groups 1 and 2 respectively in the same period of the periodic Table .Compare these elements with respect to :

Formula of their chlorides and sulphates .

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201. What is a group?

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202. What is a period in modern periodic table ?

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203. Why were Dobereiner , Newlands and Mendeleeff not 100 % successful in their classfication of elements ? Why is the modern table table relatively a better classification ? Predict the reason .

Watch Video Solution

204. How can you say that the group of chlorine (35.5), Bromine(80) and lodline (127.0) is a Dobereiner triad ?

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205. Based on the arrangement of elements, one scientist has predicted about new elements. Who is he ? Which

elements are they ?

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206. Why was the 101th element names as Mendelevium ?

Watch Video Solution

207. who proposed law of traids ?

Watch Video Solution

208. Can we know the atomic radius of an element ?

Watch Video Solution

209. Generally, which type of character the metals shows ?

Watch Video Solution

210. Define the mordern periodic law . Discuss the construction of the long form of the periodic table .

Watch Video Solution

211. Why was the basis is classificatons of elements changed from the atomic mass to the atomic number ?

Watch Video Solution

212. How do you appreciate the role of electronic configuration of the atoms of elements in periodic classification ?

Watch Video Solution

Exercise

1. Number of elements present in period - 2 of the long form periodic table _____

A. 2

B. 8

C. 18

D. 32

Answer:

Watch Video Solution

2. Nitrogen (Z=7) is the element of group V of the periodic table. Which of the following is the atomic number of the next element in the group ?

A. 9

B. 14

C. 15

D. 17

Answer:

Watch Video Solution

3. Electonic configuration of an atom is 2,8,7, . To which of the following elements would would it be chemically similar ?

A. Nitrogen (Z = 7)

B. Fluorine (Z= 9)

C. Phosphorous (Z=15)

D. Argon (Z=18)

Answer:

Watch Video Solution

Watch Video Solution

4. Which of the following is the most active metal ?

A. Lithium

B. Sodium

C. Potassium

D. Rubidium

Answer:

Watch Video Solution

5. Which of the following element is belongs to 3 period and also a 17 (VIIA) group ?

A. Fluorine

B. Bromine

C. Oxygen

D. Chlorine

Answer:

Watch Video Solution

6. Which of the following element belongs to the 4 period and IV B group ?

A. Titanium

B. Beryllium

C. Tungsten

D. Niobium

Answer:

Watch Video Solution

7. Electron affinity values of halogens are measured in

A. $K\frac{J}{m}ol^{-2}$

B. K/J mol

C. $Kjmol^{-1}$

D. $\frac{K}{J}mol^{-1}$

Answer:

Watch Video Solution

8. Which of the following elements are generally semi-conductors ?

A. Si

B. Ge

C. B

D. all

Answer:

Watch Video Solution

9. Which group elements are called halogen family ?

A. 17(VIIA)

B. 18(VIIIA)

C. 15(VA)

D. 16(VIA)

Answer:

Watch Video Solution

10. In modern periodic table each periodic ends with

A. Non-metals

B. Noble gases

C. Metals

D. Metalloids

Answer:

Watch Video Solution

11. Who noted that there were groups of elements with three elements known as traids in each groups ?

A. Dobereiner

B. Moselery

C. Mendeleeff

D. Joseph Louis Froust

Answer:

Watch Video Solution

12. Which of the following element family belongs to 16 (VIA) Group ?

A. Carbon family

B. Oxygen family

C. Boron family

D. Nitrogen family

Answer:

Watch Video Solution

13. Which block elements are called the inner transition elements ?

A. p-block

B. d-block

C. f-block

D. s-block

Answer:

Watch Video Solution

14. Which group elements are called Boron family ?

A. 13(III A)

B. 14 (IV A)

C. 2(II A)

D. 1(I A)

Answer:

Watch Video Solution

15. Which of the following group elements are called alkali metal family ?

A. (I A)

B. (VI A)

C. (VII A)

D. (VII A)

Answer:

Watch Video Solution

16. Which block elements are called as transition metals ?

A. p - block

B. d - block

C. f- block

D. s- block

Answer:

Watch Video Solution

17. According to which of the following characteristic of an element the modern periodic table is proposed ?

A. Atomic number

B. Valency

C. Symbol

D. Atomic weight

Answer:

Watch Video Solution

18. Which of the following property is measured in 'pm' (pico meter) units ?

A. Electron affinity

B. Ionisation energy

C. Atomic radius

D. Electronegativity

Answer:

Watch Video Solution

19. Which of the following group elements are nitrogen family ?

A. 14 (IV A)

B. 15 (V A)

C. 16 (VI A)

D. 1 (IA)

Answer:

Watch Video Solution

20. By analysing which patterns the modern periodic table is proposed ?

A. $\alpha - ray$

B. $\beta - ray$

C. gamma - ray`

D. X - ray `

Answer:

Watch Video Solution

21. Which of the following are elements belongs to (VIII A) group ?

A. Chalcogen

B. Halogen

C. Alkali metal

D. Noble gases

Answer:

Watch Video Solution

22. What is the general electronic configuration of Noble gases?

A. ns^2np^3

B. ns^2np^5

C. ns^2np^6

D. ns^2np^4

Answer:

Watch Video Solution

23. In which units ionizations energy can be expressed ?

A. $KJmol^{-1}$

B. $\frac{J}{K}mol^{-1}$

C. $JKmol^{-1}$

D. $\frac{K}{J}mol^{-1}$

Answer:

Watch Video Solution

24. Which of the following is defined as the number of positive charges in the atom of element ?

A. Atomic weight

B. Atomic number

C. Atomic radius

D. Valency

Answer:

Watch Video Solution

25. Which block elements are called representative elements ?

A. p - block

B. s - block

C. A and B

D. d- block

Answer:

Watch Video Solution

26. As we move from top to bottom in a group the metallic character :

A. Increase

B. Remains constant

C. Decrease

D. None

Answer:

Watch Video Solution

27. The elements which have properties that are intermediate between the properties of metals and non - metals are called _____

A. Semi-conductors

B. Semi-metals

C. Metalloids

D. All

Answer:

Watch Video Solution

28. Who arranged the elements in a chart in the systematic order in the increasing order of their atomic weights

A. Mendeleeff

B. Newlands

C. Moseley

D. Dobereiner

Answer:

Watch Video Solution

29. For which of the following need more ionization energy to remove an electron ?

A. m +3

B. m + 2

C. m + 4

D. m+ 1

Answer:

Watch Video Solution

30. Which of the following is not a Dobereiner Triad

A. Li, Na, K

B. Cl, Br, I

C. Ca,Sr, Ba

D. B, Be, C

Answer:

Watch Video Solution

31. The following are not try to arrange elements.

A. Dobereiner

B. Newlands

C. Pauling

D. Mendeleeff

Answer:

Watch Video Solution

32. The modern periodic table is organized on the basis of

A. Atomic radius

B. Atomic mass

C. Atomic number

D. Density

Answer:

Watch Video Solution

33. Gallium is named by Mendeleeff as

A. Eka boron

B. Eka aluminium

C. Eka silicon

D. None of these

Answer:

Watch Video Solution

34. Cl belongs to.....family.

A. noble gas

B. carbon family

C. halogen

D. boron

Answer:

Watch Video Solution

35. By which units atomic radius is measured ?

A. pm

B. cm

C. mm

D. m

Answer:

Watch Video Solution

36. Cl size is.....than Cl ion.

A. More

B. Less

C. Equal

D. None

Answer:

Watch Video Solution

37. $IE_2 \ldots\ldots\ldots\ldots IE_1$.

A. >

B. <

C. =

D. none

Answer:

Watch Video Solution

38. The unit for ionisation energy is

A. Erg

B. KJ

C. $KJmol^{-1}$

D. Moles

Answer:

Watch Video Solution

39. The following is metalloid.

A. Silicon

B. Na

C. Carbon

D. Fe

Answer:

Watch Video Solution

40. Which one of the following elements has more electropositivity ?

A. Chlorine

B. Carbon

C. Oxygen

D. Potassium

Answer:

Watch Video Solution

41. Number of vertical columns in the modern periodic table are _____(As per IUPAC notation).

A. 7

B. 8

C. 10

D. 18

Answer:

Watch Video Solution

42. Mendeleev's eka-aluminium is __

A. Scandium

B. Galium

C. Germanium

D. Indium

Answer:

Watch Video Solution

43. Cl belongs to _____ family.

A. Noble gas

B. Boron

C. Carbon

D. Halogen

Answer:

Watch Video Solution

44. Number of elements present in Period 1 are .....

A. 2

B. 4

C. 6

D. 8

Answer:

Watch Video Solution

45. Choose the correct answer for the following matching.

Group - A		Group - B
1) Alkali metal	( )	P) Calcium
2) Chalcogen	( )	Q) Potassium
3) Alkaline earth metal	( )	R) Sulphur

A. 1-Q,2-R,3-P

B. 1-Q,2-P,3-R

C. 1-P,2-Q,3-R

D. 1-P,2-R,3-Q

Answer:

Watch Video Solution

46. Match the following:

Element	Block
1) Na	a) f
2) Al	b) d
3) Sc	c) p
4) Ce	d) s

A. 1-a,2-b,3-c,4-d

B. 1-d,2-c,3-b,4-a

C. 1-a,2-c,3-b,4-d

D. 1-d,2-c,3-a,4-b

Answer:

Watch Video Solution

47. Which is not true about noble gases ?

A. They exist in atomic form

B. They are radioactive in nature

C. They are non-metallic in nature

D. Xenon is the most reactive among these

Answer:

Watch Video Solution

48. The electronic configuration of the first artifical element.....

A. $4f^4 5d^1 6s^1$

B. $4f^4 5d^4 6s^2$

C. $5f^4 6d^1 7s^2$

D. $5f^3 6d^1 7s^2$

Answer:

Watch Video Solution

49. What type of oxide would Eka-aluminium form ?

A. E_3O_2

B. E_2O_3

C. EO_3

D. EO

Answer:

Watch Video Solution

50. Which of the following statements is not correct ?

A. Third period in the periodic table can have a maximum of eighteen elements.

B. Some compounds of the noble gas xenon are known.

C. Group I elements are called alkali metals.

D. The last member of the halogen family is Astatine.

Answer:

Watch Video Solution

51. Point out the correct statement

A. In a period have same gaps of atomic numbers

B. In a group have same gaps of atomic masses.

C. In a group have same atomic sizes.

D. In a group have definite gapsof atomic numbers.

Answer:

Watch Video Solution

52. Which is not the characteristic of a period ?

A. The elements present have same valence shell electronic configuration of atoms.

B. The elements present do not have same atomic size.

C. The chemical properties of the elements are not similar.

D. The physical properties of the elements are not similar.

Answer:

Watch Video Solution

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53. Which defect of Mandeleeff's periodic table is automatically overcome by shifting the basis from atomic number ?

A. Position of isotopes

B. Placing coinage metals along with alkali metals

C. Position of hydrogen

D. All the above

Answer:

Watch Video Solution

54. Which of the following indicates the correct order of variation in atomic size ?

A. Be < C < F < Ne

B. Be > C > F < Ne

C. Be > C > F > Ne

D. F < Ne < Be < C

Answer:

Watch Video Solution

55. Choose the correct answer for the following matching :

Group - A		Group - B
i) s - s overlap	( )	a) π - bond
ii) s - p overlap	( )	b) H_2 molecule
iii) p - p overlap	( )	c) HCl molecule
iv) Linear	( )	d) Cl_2 molecule

A. I - a, ii - b, iii - c, iv - d

B. I - b, ii - c, iii - d, iv - a

C. I - d , ii - c, iii - b, iv - a

D. I - a , ii - d, iii - c, iv - b

Answer:

Watch Video Solution

56. Elements belonging to the same period have

A. Same valency electrons

B. Same under of shells

C. Same atomic size

D. Same electron affinity

Answer:

Watch Video Solution

57. The scientist who made maximum contribution towards periodic table was

A. Thomson

B. Bohr

C. Sommerfeld

D. Mendeleeff

Answer:

Watch Video Solution

58. Which of the following sets of atomic numbers corresponds to the atomic numbers of inert gases belonging to periods which contain 4d and 5d transition series ?

A. 56,85

B. 55,87

C. 54,86

D. 36,54

Answer:

Watch Video Solution

59. Atomic numbers of last elements of 'd' block and p block of incomplete period assuming that the period is completed.

A. 111,117

B. 112,118

C. 80,86

D. 36,54

Answer:

Watch Video Solution

60. The outermost shell of a representative element contains x electrons and penultimate shell contains Y electrons. The number of valence electrons could be.....

A. y - x

B. y

C. x

D. x + y

Answer:

Watch Video Solution

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61. Which of the following statements about the modern periodic table are incorrect ?

(a) The elements in Modern periodic table are arranged on the basis of their decreasing atomic number.

(b) The elements in Modern periodic table are arranged on the basis of their increasing atomic masses.

(c) Isotopes are placed in adjoining groups in the periodic table.

(d) The elements in the modern periodic table are arranged on the basis of their increasing atomic number.

A. d

B. a,b,c

C. a

D. a,b,d

Answer:

62. Choose the right properties of periodic table.

(a) Atomic radius increases from top to bottom along a group.

(b) Atomic radius decreases from left to right along a period.

(c) Valency remains the same in a group.

(d) Ionisation energy increases on moving down a group.

A. d

B. b,c

C. a,b,c

D. a

Answer:

Watch Video Solution

63. Which of the following species does have electrons equal to 18 ? (a) K^+ (b) Cl^- (c) Ca^+2 (d) K

A. a

B. a, b

C. d

D. a,b,c

Answer:

Watch Video Solution

64. Pick out the correct statements about chlorine atom.

(a) Chlroine is more electronegative atom

(b) Chlorine atom belongs to Halogan family

C) Its valency is +2

(d) The atomic number is chlorine is 17

A. c

B. a,b,c

C. a,c

D. a,b,d

Answer:

Watch Video Solution

65. What are the elements that belonged to 18th (or) '0' group ? (a) Helium (b) Neon (c) Fluorine (d) Xenon

A. a,b

B. a,b,c

C. a,b,d

D. c

Answer:

Watch Video Solution

66. Electronic configuration from $ns^2\ np^1$ to $np^2\ np^6$ are called ____

A. s-block elements

B. p-block elements

C. d-block elements

D. f-block elements

Answer:

Watch Video Solution

67. 1 pm = ...

A. 10^{-11}

B. 10^{-12}

C. 10^{-13}

D. 10^{-18}

Answer:

Watch Video Solution

68. _____ block elements are called as lanthanides and actinides in modern periodic table.

A. s

B. p

C. f

D. d

Answer:

Watch Video Solution

69. "The law states hat the physical and chemical properties of the elements are periodic functions of their atmic weights ".

A. Mosley's periodic law

B. Mendeleeff's periodic law

C. Newlands's periodic law

D. Proust's periodic law

Answer:

Watch Video Solution

70. VI A group elements are called chalcogens. This is because

A. They are available in earth crust

B. They are ore forming elements

C. They are salt forming elements

D. They are available in native state

Answer:

Watch Video Solution

71. The general electronic configuration of d-block elements is

A. $ns^1 - ns^2$

B. $ns^2 - ns^2np^1$

C. $(n-1)d^1 - 5ns^1 - 2$

D. $(n-1)c^1 - 10ns^1 - 2$

Answer:

Watch Video Solution

72. The size of anion is more than neutral atom. This is due to

A. More nuclear charge in anion than neutral atom

B. Less nuclear charge in anion than neutral atom

C. More number of protons in anion

D. Less number of electron in neutral atom

Answer:

Watch Video Solution

73. Which of the following is correct with respect to size ?

A. AtomltAnionltCation

B. AnionltAtomltCation

C. CationltAtomltAnion

D. CationltAnionltAtom

Answer:

Watch Video Solution

74. $M^+ + IE_2 = M^{+2}(g) + e^-$ This represents

A. Electron affinity

B. Ionizationi energy

C. Second ionization energy

D. Electrongativity

Answer:

Watch Video Solution

75. In a period, I.E increases due to

A. Increase in number of shells

B. Increase in atomic size

C. Decrease in nuclear charge on valence electrons

D. Increase in nuclear charge on valence electrons

Answer:

Watch Video Solution

76. The I.E of 'N' is more than oxygen even though the size of 'O' is less than 'N'. This is due to

A. Half-filled configuration in 'N'

B. Half-filled configuration in 'O'

C. Full-filled configuration in 'N'

D. Full-filled configuration in 'O'

Answer:

Watch Video Solution

77. The formula of chloride formed by eka silicon

A. $EsCl_2$

B. $EsCl_4$

C. $EsCl_3$

D. $EsCl_6$

Answer:

Watch Video Solution

78. Which of the following atomic numbers belongs to same period ?

A. 5,6,7

B. 1,3,5

C. 2,4,6

D. 9,17,35

Answer:

Watch Video Solution

79. The size of Na^+ is less than 'Na' . This is due to

A. More nuclear charge in Na^+

B. More electronegativity in Na^+

C. Less nuclear charge in Na^+

D. More electronegativity in Na

Answer:

Watch Video Solution

80. Which pair of elements are lanthanides ?

A. Pa, Pu

B. Pm, Sm

C. Re, Rh

D. Ag, Hg

Answer:

Watch Video Solution

81. Arrange the following elements in the order of their decreasing metallic character Na, Si, Cl, Mg, Al

A. Na > Mg > Al > Si > Cl

B. Cl > Si > Al > Mg > Na

C. Al > Na > Si > Cl > Mg

D. Na > Al > Mg > Cl > Si

Answer:

82. Arrange the following elements in the order of their increasing non-metallic character Li, O,C, Be, F

A. F < O < C < Be < Li

B. F< C< O < Be < Li

C. Li < Be < C < O < F

D. F < O < Be < C < Li

Answer:

Watch Video Solution

83. Which of the following elements gives the correct increasing order of the atomic radii of O,F and N ?

A. F,O,N

B. O,F,N

C. N,F,O

D. O,N,F

Answer:

Watch Video Solution

84. Which of the following reasons corresponds to decrease in IP value from top to bottom in a group ?

A. Increase in screening effect

B. Increase in atomic number

C. Decrease in screening effect

D. Decrease in nuclear charge

Answer:

Watch Video Solution

85. Nuclear charge increase both in a period and group. But, effective nuclear charge increase in a period and decreases in a group. Identify the correct reverse trend.

A. Role of inter electronic repulsions

B. Reverse trend of metallic character

C. Role of screening effect

D. Reverse trend of atomic size

Answer:

Watch Video Solution

86. Nitrogen (Z=7) is the element of group V of the periodic table. Which of the following is the atomic number of the next element in the group ?

A. 9

B. 14

C. 15

D. 17

Answer:

Watch Video Solution

87. Which of the following group elements are called alkali metal family ?

A. (IA)

B. (VIA)

C. (VIIA)

D. (VIIIA)

Answer:

Watch Video Solution

88. An element M, is in the 13th group, the formula of its chloride is

A. MCl

B. MCl_2

C. MCl_3

D. M_2Cl_3

Answer:

Watch Video Solution

89. Which of the following sets does not belong to a group ?

A. Ne, Ar, kr

B. Na, K, Rb

C. B, Al, Ga

D. Mg, Al, Ca

Answer:

Watch Video Solution

90. Which is the wrong sequence of the elements in a group ?

A. N,P, As

B. Ca, Sr, Ba

C. Cu,Au, Ag

D. Cl,Br, I

Answer:

Watch Video Solution

91. Which of the following sets of elements belongs to alkali metals ?

A. 37,19,3,55

B. 1,12,30,4,62

C. 12,20,56,88

D. 9,17,35,53

Answer:

Watch Video Solution

92. The outermost main shell of an element is 'M' shell. This element belongs to ___ period.

A. 1

B. 2

C. 3

D. 4

Answer:

Watch Video Solution

93. Which of the following is an element in $3^r d$ period II group

A. Mg

B. Cl

C. Ca

D. K

Answer:

Watch Video Solution

94. Actinides belongs to __ period.

A. Si

B. Ga

C. Pb

D. Al

Answer:

Watch Video Solution

95. The electronegativity of the following elements increase in the order

A. N,Si, C,P

B. P,Si,N,C

C. C,N,Si,P

D. Si,P,C,N

Answer:

Watch Video Solution

96. The incompletely filled period is ___

A. 5

B. 7

C. 4

D. 6

Answer:

Watch Video Solution

97. The element for which the electronic configuration does not justify its inclusion in a block is

A. Ca

B. Li

C. He

D. Be

Answer:

Watch Video Solution

98. Ionization energy increases with the Increase of ___

A. Nuclear charge

B. Atomic radius

C. Screening effect

D. None

Answer:

Watch Video Solution

99. Newlands' periodic table restricted to ___ elements.

A. 56

B. 55

C. 50

D. 59

Answer:

Watch Video Solution

100. Electronic configuration from $ns^2\ np^1$ to $np^2\ np^6$ are called ____

A. s-block elements

B. p-block elements

C. d-block elements

D. f-block elements

Answer:

Watch Video Solution

101. s and p-block elements are called ___

A. Representative elements

B. Transition elements

C. Inner transition elements

D. Zero group elements

Answer:

Watch Video Solution

102. Valency of chlorine is _____

A. 1

B. 2

C. 3

D. 4

Answer:

Watch Video Solution

103. 1 pm = ...

A. 10^{-11}

B. 10^{-12}

C. 10^{-13}

D. 10^{-8}

Answer:

Watch Video Solution

104. The most electronegative element is

A. Chlorine

B. Nitrogen

C. Fluorine

D. Oxygen

Answer:

Watch Video Solution

105. The most electropositive element is

A. Hydrogen

B. Fluorine

C. Barium

D. Casium

Answer:

Watch Video Solution

106. ___is IIA group element.

A. Sodium

B. Magnesium

C. Boron

D. Carbon

Answer:

Watch Video Solution

107. Noble gas elements has valency_____

A. 0

B. 1

C. 2

D. 3

Answer:

Watch Video Solution

108. _____ block elements are called as lanthanides and actinides in modern periodic table.

A. s

B. p

C. f

D. d

Answer:

Watch Video Solution

109. _____ was the basis of the classifications proposed By Dobereiner , Newlands and Mendeleeff .

A. Atomic number

B. Atomic weight

C. Structure of atom

D. Electronic configuration

Answer:

Watch Video Solution

110. The element at the bottom of a group would be expected to show _____ metallic charcter than the element at the top .

A. low

B. high

C. medium

D. none

Answer:

Watch Video Solution

Watch Video Solution

111. Law of traids was proposed by.....

A. Johann Wolfgang Dobereiner

B. Moseley

C. Mendeleeff

D. John Newlands

Answer:

Watch Video Solution

112. Law of traids was proposed by.....

A. Johann Wolfgang Dobereiner

B. Moseley

C. Mendeleeff

D. John Newlands

Answer:

Watch Video Solution

113. Law of octaved holds good only for the elements upto.....

A. Hydrogen

B. carbon

C. calcium

D. argon

Answer:

Watch Video Solution

114. The name of 101th elements is__

A. borolinium

B. lanthanivium

C. mendelivium

D. scandinavium

Answer:

Watch Video Solution

115. The physical and chemical properties of an atom depends on its

A. atomic number

B. atomic weight

C. atomic volume

D. size of the atom

Answer:

Watch Video Solution

116. Number of elements in 6th period of modern periodic table is _____

A. 28

B. 18

C. 8

D. 32

Answer:

Watch Video Solution

117. $4f$ elements are called _____

A. s-block

B. transition

C. inner transition

D. inert gases.

Answer:

Watch Video Solution

118. The atomic radius of Cl _____ than Cl^- atom.

A. lesser

B. greater

C. equal

D. does not exist

Answer:

Watch Video Solution

119. In which units ionizations energy can be expressed ?

A. J/m

B. K.J. mol

C. J.mol

D. $KJ.\ mol^{-1}$

Answer:

Watch Video Solution

120. Metals are at _____ side of the periodic table.

A. left

B. top

C. bottom

D. right

Answer:

Watch Video Solution

121. .....elements were discovered up to 1865.

A. 65

B. 11

C. 2

D. 15

Answer:

122. Newlands octaves first element resembles

A. 2nd element

B. 8th element

C. 3rd element

D. 7th element

Answer:

Watch Video Solution

123. Vertical clumns of Mendeleeff are called _____

A. groups

B. periods

C. blocks

D. elements

Answer:

Watch Video Solution

124. The number of sub-groups in each group of Mendeleeff's periodic table is.....

A. 1

B. 3

C. 2

D. 5

Answer:

Watch Video Solution

125. .....,.....are anomalous pair of elements in Mendeleeff's periodic table.

A. Cobalt, Tungsten

B. Cobalt, Nickel

C. Nickel, Tungsten

D. Tungsten, Nickel

Answer:

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126. Modern periodic table consists of _____ periods and _____ groups.

A. 7,16

B. 7, 18

C. 18,7

D. 16,7

Answer:

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127. 1st period contains.....elements.

A. 18

B. 8

C. 2

D. 10

Answer:

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128. The elements with three or less than three electrons in the outer shell are considered as

A. metals

B. gases

C. non-metals

D. liquids

Answer:

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129. The elements which have properties that are intermediate between the properties of metals and non - metals are called _____

A. metalloids

B. solids

C. liquids

D. gases

Answer:

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130. _____ of an element was defined as combining power of an element with respect of hydrogen and oxygen.

A. Oxidation

B. Reduction

C. Valence

D. Reactivity

Answer:

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131. Atomic radii of elements.....across a period from left to right.

A. decrease

B. increase

C. no change

D. can't say

Answer:

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132. The relative tendency of its atom to attract electrons towards it when it is bounded to the atom of another

element is called

A. Electron affinity

B. electropositivity

C. electrol negativity

D. lonization energy.

Answer:

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133. The metallic character _____ while non metallic character _____ along a period.

A. decrease,increase

B. increase,decrease

C. increase,increase

D. decrease,decrease

Answer:

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134. Si and Ge are _____

A. metals

B. non-metals

C. metalloids

D. liquids

Answer:

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135. Which pair of elements belongs to the same group ?

(atomic numbers are given)

A. 17,38

B. 20,40

C. 17,53

D. 11,53

Answer:

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136. O2-2 is isoelectronic with

A. H_2

B. N_2

C. F_2

D. S

Answer:

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137. Highest I.P is for

A. Li^+

B. $Mg^{+}2$

C. $Al^{+}3$

D. All have equal values

Answer:

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138. Electron affinity of Fluorine is less than that of Chlorine because

A. smaller size of Cl

B. larger size of Cl

C. smaller size of F

D. larger size of F

Answer:

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139. Which is the strongest base ?

A. BeO

B. MgO

C. Al_2O_3

D. SiO_2

Answer:

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140. Amphoteric oxide is

A. Na_2O

B. MgO

C. Al_2O_3

D. P_2O_5

Answer:

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141. Highest oxidation state of +8 is given by

A. Os

B. Ru

C. Xe

D. All

Answer:

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142. The most common oxidation state of Lanthanide is

A. `+2

B. `+3

C. `+4

D. `+1

Answer:

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143. In the sixth period, the orbitals being filled with electrons are

A. 5s, 5p, 5d

B. 6s,6d, df

C. 6s,5f,df,dp

D. 6s,4f,5d,6f

Answer:

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144. Which species has the maximum ionic radius ?

A. $Na+$

B. O^{-2}

C. F

D. $Mg^{+}2$

Answer:

Watch Video Solution

145. The decreasing order of second ionisation potential of K, Ca, Ba is

A. KgtCagtBa

B. CagtBagtK

C. BagtKgtCa

D. KgtBagtCa

Answer:

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146. Highest covalent character is found in

A. CaF_2

B. $CaCl_2$

C. $CaBr_2$

D. CaI_2

Answer:

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147. An element with atomic number 20 will be placed in which period of the periodic table?

A. 4th period, 2nd group

B. 2nd period, 14th group

C. 3rd period, 3rd group

D. 3rd period, 13th group

Answer:

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148. In inner transition elements, the differentiating electron enters into the.....

A. p-sub level

B. d - sub level

C. f- sub level

D. s - sub level

Answer:

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149. The maximum atomic radius exists for

A. P

B. Mg

C. Al

D. Si

Answer:

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150. $Na^+, Mg^{2}+, Al^{3}+, Si^{4}+$ are isoelectronic. Their ionic size following the ordre.....

A. $Na+ < Mg^{2}+ < Al^{3}+ < Si^{4}+$

B. $Na \Rightarrow Mg^{2} < Al^{3}+ < Si^{4}+$

C. $Na^+ < Mg^{2}+ > Al^{3}+ > Si^{4}+$

D. $Na^+ > Mg^{2}+ > Al^{3}+ > Si^{4}+$

Answer:

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151. The starting element in any period the periodic table is.....

A. An alkali metal

B. A transitional metal

C. Metalloid

D. A non-metal

Answer:

Watch Video Solution

152. The ending element in any period in the periodic table is.....

A. An alkali metal

B. A transitional metal

C. an inner transition metal

D. a noble gas

Answer:

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153. The general electronic configuration of elements of p-block is represented by

A. $ns^1 \rightarrow ns^2$

B. $ns^2 \rightarrow np^6$

C. ns^2np^1 to ns^2np^6

D. $(n-1)d^1 - 10ns^0 - 2$

Answer:

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154. In a table of elements, each element has similar properties with eighth element. Which law do they obey? Who found it ?

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155. Which period starts with M main shell? Name the sub-shells in it? How many elements are there in this period ? Name any two elements in it ?

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156. Which is easy to remove electron between the element having electronic configuration of $1s^2 2s^2 2p^4$ and $1s^2 2s^2 2p^3$? Why ?

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157. For a element, the value of electron gain enthalpy is positive. Which type of element it may be ? What this value is positive ?

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158. Element with electronic configuration $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^3$ belongs to the .....group of the periodic table

A. 3rd

B. 5th

C. 7th

D. 2nd

Answer:

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159. The element with atomic number 7 is found in

A. 1st period IA group

B. 2nd period VA group

C. 2nd period IIIA group

D. 2nd period IVA group

Answer:

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160. Moseley calculated the number of positive charges in the atoms by analysing their___.

A. X-ray patterns

B. line spectrum

C. chemical properties

D. a-ray patterns

Answer:

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161. Elements with electronic configuration ns^1 and ns^2 are called __

A. p-block elements

B. s-block elements

C. d-block elements

D. f-block elements

Answer:

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162. Atomic weight = _____

A. Equivalent weight x valency

B. $\frac{Equivalentweight}{Valency}$

C. Equivalent weight + valency

D. Equivalent weight

Answer:

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163. No. of groups in modern periodic table.....

A. 16

B. 20

C. 24

D. 18

Answer:

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164. According to Mulliken, electronegativity = _____

A. $\frac{I.E + E.A}{2}$

B. I.E + E.A

C. 2(I.E. + E.A)

D. 2I.E + E.A

Answer:

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165. Elements from $_{}^{58}Ce$ to $_{}^{71}Lu$ are called _____

A. lanthanides

B. actinides

C. inert gases

D. transition elements

Answer:

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166. Correct order of size

A. $I > I^{->} I^{+}$

B. $I^{->} I > I^{+}$

C. $I^{+} > I^{\rightarrow} I$

D. $I^{\rightarrow} I > I^{+}$

Answer:

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167. Electron affinity of Fluorine is less than that of Chlorine because

A. smaller size of Cl

B. larger size of Cl

C. smaller size of F

D. larger size of F

Answer:

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168. In dobereiner triad, the atomic weight of middle element is :

A. Sum of atomic weight of two elements

B. Product of atomic weight of two elements

C. Average of atomic weight of two elements

D. Ratio of atomic weight of two elements

Answer:

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169. Which of the following relation is correct ?

A. Atomic weight = Equivalent weight x Valency

B. Atomic size = Equivalent weight x Valency

C. Equivalent weigth x Valency

D. All the above

Answer:

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170. 5f elements are called.....

A. Actinides

B. Lanthanides

C. Transition elements

D. Representative elements

Answer:

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171. Periodicity is observed in periodic table due to reappearance of similar valency shell configuration after regular interval of

A. 1,3,5,7,9

B. 2,8,8,18,18,32

C. 5,10,15,20,25

D. 20,30,40,50

Answer:

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172. The formula of oxides and chloride of Eka-Silicon is

A. $ESO_2, ESCl_2$

B. $ES_2O_3, ESCl_4$

C. ESO_2 and $ESCl_2$

D. $ESO, ESCl_2$

Answer:

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173. Which block the element having $1s^2 2s^2 2p^4$ beongs to ?Why ?

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174. Which elements are called p-block elements ?

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175. What is the valency of IVA group elements with respect to hydrogen ?

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176. Because of screening effect, the ionization energy becomes less. Explain it with an example.

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177. "The properties of elements are the periodic functions of their atomic masses"

A. Dobereiner traid

B. Newland's law of octaves

C. Mendeleeff's periodic law

D. Bohr's model

Answer:

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178. Write few sentences about Newland's law of octaves. The elements present on the right side of the modern

periodic table known as.

A. Metals

B. non-metals

C. metalloids

D. None of these

Answer:

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179. Electron gain enthalpy is known as

A. valence

B. lonization energy

C. electron affinity

D. electronegativity.

Answer: