

Date Planned : __ / __ / __	Daily Tutorial Sheet-10	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-2	Exact Duration : _____

116. Colour of La^{2+} is due to :
(A) d-d transition **(B)** f-f transition **(C)** charge transfer **(D)** None of these
117. Which of the following element is used in the treatment of cancer ?
(A) Uranium **(B)** Thorium **(C)** Cerium **(D)** Plutonium
118. The gradual decrease in radius of M^{3+} ion for lanthanids is not obeyed by :
(A) Eu only **(B)** Yb only
(C) Both Eu and Yb **(D)** None of these
119. Actinide contraction is more compared to lanthanide contraction because :
(A) Shielding by 5f-electron is weaker than 4f-electrons over the valence shell electron
(B) 4f-orbitals are more diffused as compared to 5f-orbital
(C) Shielding effect of electrons present in 4f- and 5f-orbitals is equal
(D) The azimuthal quantum numbers of 4f- and 5f-orbitals are the same
120. Which of the following elements has maximum composition in Misch metal, which is used in gas lighters?
(A) La **(B)** Fe **(C)** Ce **(D)** Other metals 
121. Which of the following elements is not an f-block element ?
(A) No **(B)** Nd **(C)** Nb **(D)** Np
122. Which of the following Ce compound is used for making crucibles ?
(A) CeO_2 **(B)** CeS **(C)** ThO_2 **(D)** Nd_2O_3
123. Which of the following statements is true for f-block elements ?
(A) They can have electrons from f^0 to f^{14} .
(B) Group number is 3 in the periodic table.
(C) With the increase in number of f-electrons, the atomic radius usually decreases due to poor shielding effect of f-electrons.
(D) All of these
124. Which of the following characteristics is not the point of resemblance between lanthanides and actinides?
(A) Reducing property **(B)** Oxidation state of +3 
(C) Trends of ionic radii for M^{3+} ions **(D)** Tendency towards complex formation
125. Td^{4+} (atomic number 65) is stable because :
(A) it has noble gas configuration
(B) it has half-filled electronic configuration of f-orbitals
(C) it has fully-filled electronic configuration of d-orbitals
(D) it has fully-filled electronic configuration of f-orbitals