**Time :** 13:14:00 **CHEMISTRY**

**Marks :** 3176

8.THE D-AND F-BLOCK ELEMENTS

**Single Correct Answer Type**

1. On strongly heating we get:

 a) b) Silver nitride c) Ag d)

2. Transition metals in their compounds show:

 a) Ionic bonds

 b) Covalent bonds

 c) Ionic and covalent bonds

 d) Ionic and coordinate bonds

3.  In the above reaction, *X* is

 a) b) c) d)

4. Cynaide process is used for the extraction of

 a) Au b) Ag c) Cu d) Both (a) and (b)

5. The colour of zinc sulphide is:

 a) Yellow b) White c) Brown d) Black

6. The metal extracted by cyanide process is

 a) Silver b) Copper c) Iron d) Sodium

7. Which metal gives hydrogen gas on heating with hot concentrated alkali?

 a) Ag b) Ni c) Zn d) Cu

8. Which of the following metal ions is not coloured?

 a)  b) c) d)

9. The process of extraction of Au and Ag ores is based on their solubility in:

 a) b) HCl c) d) KCN

10. In the process of extraction of gold,

Roasted gold ore

 Identify the complexes [] and []

 a) b)

 c) d)

11. To dissolve argentite ore which of the following is used?

 a) b) c) d)

12. The magnetic moment , of transition metals is related to the number of unpaired elelctrnos *n* as

 a) b) c) d)

13. Melting of Zn metal and then pouring it into cold water gives:

 a) Zn dust b) Granulated Zn c) Hard Zn metal d) Soft Zn metal

14. Percentage of gold in Fool’s gold is

 a) Zero b) 8 c) 16 d) 30

15. Copper sulphate is commercially made from copper scrap by:

 a) Dissolving in hot concentrated sulphuric acid

 b) Action of dilute sulphuric acid and air

 c) Heating with sodium sulphate

 d) Heating with sulphur

16. Which of the following compounds has colour but no unpaired electrons?

 a)

 b)

 c)

 d)

17. Mercury forms amalgams with all except:

 a) Al b) Zn c) Ni d) Fe

18. Granulated Zn is obtained by:

 a) Suddenly cooling molten Zn

 b) Adding molten Zn to water

 c) Heating Zn 100 to 150°C

 d) Dropping molten Zn drop by drop

19. In the first transition series, the differentiating electron enters:

 a) 5-orbital b) 4-orbital c) 3-orbital d) 2-orbital

20. Identity the ore not containing iron.

 a) Limonite b) Siderite c) Carnallite d) Chalcopyrites

21. Purest form of iron is

 a) Cast iron b) Pig form c) Wrought iron d) Steel

22. Which metal adsorbs hydrogen?

 a) Pd b) K c) Al d) Zn

23. The most abundant ore of iron is:

 a) Haematite b) Limonite c) Magnetite d) Siderite

24. Metallic silver may be obtained from by

 a) Heating it in the current of b) Fusing it with sand

 c) Treating with carbon monoxide d) Fusing it with

25. Choose the correct statement.

 a) Transition elements have low melting points.

 b) Transition elements do not have catalytic activity.

 c) Transition elements exhibit variable oxidation states.

 d) Transition elements show inert pair effect.

26. Bessemer’s converter is used in the manufacture of:

 a) Cast iron b) Pig iron c) Steel d) Wrought iron

27. Number of electrons present in the outermost orbit of Fe atom is:

 a) 3 b) 1 c) 2 d) 4

28. Which will reduce acidified potassium dichromate solution?

 a) Potash alum b) Mohr’s salt c) Chile saltpetre d) White vitriol

29. The lanthanoids contraction relates to

 a) Atomic radii b) Atomic as well as radii

 c) Valence electrons d) Oxidation states

30. Transition metals show paramagnetism due to

 a) High lattice energy b) Characteristics configuration

 c) Variable oxidation states d) Unpaired electrons

31. ‘Mercury’ tree can be prepared:

 a) By mixing up mercuric thiocyanate and gum

 b) By adding Nessler’s reagent to a ammonium salt solution

 c) By pouring little mercury into solution

 d) By heating mercuric chloride

32. When excess of is added to a solution of , a white ppt. turning to grey is obtained. This grey colour is due to the formation of:

 a) b) c) d)

33. Among the following, the compound that is both paramagnetic and coloured is

 a) b) c) d)

34. All the metals form oxides of the type *MO* except

 a) Copper b) Barium c) Silver d) Lead

35. Cinnabar is an ore of:

 a) Lead b) Zinc c) Silver d) Mercury

36. Heating mixture of and will give

 a) b) c) d)

37. The substance that sublimes on heating is:

 a) b) AgCl c) d) NaCl

38. Actinides

 a) Have variable valency b) Include element 12

 c) Are all synthetic elements d) Have only short lived isotopes

39. The -transition series contains elements from atomic number:

 a) 22 to 30 b) 21 to 30 c) 21 to 31 d) 21 to 29

40. Which of the following is not a characteristic of transition elements?

 a) Variable oxidation states b) Formation of coloured compounds

 c) Formation of interstitial compounds d) Natural radioactivity

41. An element which is highly toxic for plants and animals is:

 a) Au b) Mn c) Hg d) Ca

42. Native silver metal forms a water soluble complex with a dilute aqueous solution of NaCN in presence of:

 a) Nitrogen b) Oxygen c) d) Ar

43. Calamine is

 a) b) c) d)

44. Which series of elements have nearly the same atomic radii?

 a) F, Cl, Br, I b) Na, K, Rb, Cs c) Li, Be, B, C d) Fe, Co, Ni, Cu

45. Which transition elements exhibit +8 oxidation states?

 a) Cu, Zn b) Ru, Os c) Ag, Au d) Cu, Cr

46. When  is oxidized by in alkaline medium,

 a) b) c) d)

47. Which of the following compounds is used as the starting material for the preparation of potassium dichromate?

 a) (Chrome alum)

 b) (Chrome yellow)

 c) (Chromite)

 d) (Chrome red)

48. Which metal makes steel suitable for cutting purposes by maintaining the cutting edge of the blade?

 a) Mn b) Al c) W d) C

49. Which form of iron is least ductile?

 a) Hard steel b) Cast iron c) Mild steel d) Wrought steel

50. Amalgams are:

 a) Always solid

 b) Highly coloured alloys

 c) Alloys which contain mercury as one of the contents

 d) Compounds of mercury

51. Which of the following is a poison?

 a) b) c) d)

52. Addition of high proportions of manganese makes steel useful in making rails of rail roads because manganese ;

 a) Gives hardness to steel and can remove oxygen and sulphur

 b) Helps the formation of oxides of iron

 c) Can show highest oxidation state of +7

 d) None of the above

53. Pick out the correct statements from the following.

1. Cobalt (III) is more stable in octahedral complexes.
2. Zinc forms coloured ions or complexes.
3. Most of the -block elements and their compounds are ferromagnetic.
4. Osmium shows (VIII) oxidation state.
5. Cobalt (II) is more stable in octahedral complexes.

 a) 1 and 2 b) 1 and 3 c) 2 and 4 d) 1 and 4

54. Ferrous sulphate on heating gives:

 a) b) c) d) All of these

55. Hydrometallurgy is based on

 a) Calcination b) Roasting c) Oxidation d) Reduction

56. In context with the transition elements, which of the following statements is incorrect?

 a) In addition to the normal oxidation state, the zero oxidation state is also shown by these elements in complexes.

 b) In the highest oxidation state, the transition metal shows basic character and form cationic complexes.

 c) In the highest oxidation state of the first five transition elements (Sc to Mn), all the and electrons are used for bonding.

 d) Once the configuration is exceeded, the tendency to involve all the electrons in bonding decreases.

57. Which one of the following pairs of elements is called ‘chemical twins’ because of their very similar chemical properties?

 a) Mn and W b) Mo and Tc c) Fe and Re d) Hf and Zr

58. Which one of the following exist in the oxidation state other than +3?

 a) B b) Al c) Ce d) Ga

59. Excess of KI reacts with solution and then solution is added to it. Which of the statement is incorrect for this reaction?

 a) is formed b) is oxidised c) is formed d) Evolved is reduced

60. Which is formed when iron reacts with carbon?

 a) b) c) d)

61. From sodium agrentocyanide , silver is precipitated by adding a powder of:

 a) Tin b) Zinc c) Mercury d) Calcium

62. Which is used for electrical purposes?

 a) German silver b) Beryllium bronze c) Constantan d) Fool’s gold

63. Monel metal is an alloy of?

 a) Cu, Ni, Fe, Mn b) Cu, Sn, Zn c) Cu, Sn, P d) Cu, Zn

64. Which metal is not used for making coins?

 a) Gold b) Silver c) Nickel d) Tungsten

65. Which is not true?

 a) ZnS is white solid which turns yellow on exposure to light

 b) ZnS is precipitated on passing to aqueous

 c) Basic zinc carbonate is

 d) reacts with (g) to give [

66. Gold is extracted by hydrometallurgical process, based on its property

 a) Of being electropositive b) Of being less reactive

 c) To form complexes which are water soluble d) To form salts which are water soluble

67. Which is less reactive?

 a) Fe b) Ni c) Pt d) Co

68. Thermal decomposition of zinc nitrate gives:

 a) Zn b) ZnO c) d) NO

69. Copper nitrate on strongly heating gives:

 a) Cu b) Cupric oxide c) Cuprous oxide d) cupric nitrate

70. Which compound is used as a purgative in medicine?

 a) b) c) CuCl d)

71. Correct formula of calomel is

 a) b) c) d)

72. The reaction of with NaCl and conc gives

 a) b) c) d)

73. A compound in which a metal ion (Z=25) has a spin only magnetic moment of BM. The number of unpaired electrons in the compound and the oxidation state of the metal ion are respectively.

 a) 4 and 2 b) 5 and 3 c) 3 and 2 d) 4 and 3

74. From an aqueous solution of zinc sulphate, normal zinc carbonate may be precipitated by:

 a) Passing

 b) Warming with

 c) Adding

 d) Boiling with

75. The catalyst used for the hydrogenation of vegetable oils for making margarine is:

 a) Cu b) Na c) Ni d) Zn

76. Which of the following compound is expected to be coloured?

 a) b) c) d)

77. Copper can be extracted from:

 a) Kupfer-nickel b) Dolomite c) Malachite d) Galena

78. Refining of impure copper with zinc impurity is to be done by electrolysis using electrodes as

**Cathode Anode**

 a) Pure copper Pure zinc b) Pure zinc Pure copper

 c) Pure copper Impure copper d) Pure zinc Impure zinc

79. Molten Ag absorbs about ……… times of :

 a) 10 b) 20 c) 40 d) 80

80. Which of the following ion is diamagnetic?

 a) b) c) d)

81. A red solid is insoluble in water. However, it becomes soluble if some KI is added to water. Heating the red solid in a test tube results in liberation of some violet coloured fumes and droplets of a metal appear on the cooler parts of the test tube. The red solid is

 a) b) c) d)

82. Of the following outer electronic configurations of atoms, the highest oxidation state is achieved by which one of them?

 a) b) c) d)

83. The oxidation number of Mn in the product of alkaline oxidative fusion of is

 a) 2 b) 3 c) 4 d) 6

84. Iron sheets are galvanized mainly to:

 a) Harden the surface

 b) Increase lustre

 c) Prevent action of water

 d) Prevent action of oxygen and water

85. Copper metal is not used:

 a) In taps and water connections

 b) As an alloy in high speed drills

 c) In electric motor coils

 d) In brass utensils

86. In the equation,

 Identify the metal *M*

 a) Copper b) Iron c) Silver d) Zinc

87. Vapour phase refining of nickel is carried out by using

 a) b) c) d)

88. Lanthanide contraction is due to increase in

 a) Shielding by -electrons b) Atomic number

 c) Effective nuclear charge d) Size of -orbitals

89. Which of the following ions is coloured?

 a) b) c) d)

90. Pig iron:

 a) Contains carbon and other impurities

 b) Is pure form of iron

 c) Is same as wrought iron

 d) Is same as steel

91. In aqueous solution ion acts as

 a) An oxidizing agent b) A reducing agent c) An acid d) All of these

92. Transition elements form complexes because of:

 a) Small cation size b) Vacant -orbitals c) Large ionic charge d) All are correct

93. Philosopher’s wool on heating with BaO at 1100 C produce

 a) b) c) d)

94. Which of the following trivalent ion has the largest atomic radii in the lanthanide series?

 a) Ce b) Pm c) La d) Lu

95. Ferrous ion changes to *X* ion, on reacting with acidified hydrogen peroxide. The number of -electrons present in *X* and its magnetic moment (in BM) are, respectively

 a) 6 and 6.93 b) 5 and 5.92 c) 5 and 4.9 d) 4 and 5.92

96. Which of the following is amphoteric oxide?

 a) b) c) ZnO d)

97. The valence shell electronic configuration of ion is

 a) b) c) d)

98. Which of the following ore is an ore of copper?

 a) Argentite b) Haematite c) Malachite d) Calamine

99. Chinese white is:

 a) ZnS b) c) d) ZnO

100. Cerium is an important member of the lanthanides. Which of the following statement about cerium is incorrect?

 a) The common oxidation states of cerium are +3 and +4

 b) Cerium (IV) acts as an oxidizing agent

 c) The +4 oxidation state of cerium is not known in solutions

 d) The +3 oxidation state of cerium is more stable than the +4 oxidation state

101. If orange-red colour is absorbed from white light, the observed colour is:

 a) Yellow b) Orange c) Blue d) Violet

102. Which forms interstitial compounds?

 a) Fe b) Ni c) Co d) All of these

103. Steel that is resistant to acids is:

 a) Carbon steel b) Molybdenum steel c) Stainless steel d) Nickel alloy steel

104. Hardness of transition elements is due to:

 a) Large atomic size

 b) Metallic bonding

 c) Covalent bonds

 d) High ionization energy

105. Which does not possess allotropic forms?

 a) C b) Sn c) Fe d) P

106. When hydrogen peroxide is added to acidified potassium dichromate, a blue colour is produced due to formation of

 a) b) c) d)

107. In the extraction of Ag, is dissolved in:

 a) HCl b) c) KCN d)

108. The meniscus of mercury in a glass tube is:

 a) Convex upwards b) Concave c) Plane d) Convex inwards

109. The iron obtained from the blast furnace is called:

 a) Pig iron b) Cast iron c) Wrought iron d) Steel

110. Which one of the following has strongest metallic bonding?

 a) Fe b) Sc c) V d) Cr

111. The alloy which contains nickel is:

 a) Brass b) Bell metal c) Bronze d) German silver

112. A hard and resistant alloy generally used in tip of nib of pen is:

 a) Os, Ir b) Pt, Cr c) V, Fe d) Fe, Cr

113. The extraction of which of the following metals involves bessemerization?

 a) Fe b) Ag c) Al d) Cu

114. CuCl absorbs

 a) b) c) d)

115. dissolves in aqueous NaOH to give

 a) b) c) d)

116. One of the following metals is obtained by leaching its ore with dilute cyanide solution. Identify it.

 a) Titanium b) Vanadium c) Silver d) Zinc

117. German silver alloy contains

 a) Zinc, silver and copper b) Nickel ,silver and copper

 c) Germanium ,silver and copper d) Zinc, nickel and copper

118. Copper metal of high purity is obtained by:

 a) Carbon reduction b) Hydrogen reduction c) Electrolytic method d) Thermite process

119. The solubility of silver bromide in hypo solution is due to the formation of :

 a) b) c) [Ag d) [Ag

120. Which of the following is a ferrous alloy?

 a) Invar b) Solder c) Magnalium d) Type metal

121. Consider the following statements.

(I) is the least basic among hydroxides of lanthanides

(II) and  possess almost the same ionic radii

(III) can act as an oxidizing agent

Which of the above is/are true?

 a) (I) and (III) b) (II) and (III) c) (II) only d) (I) only

122. Iodide of Millon’s base is:

 a) b)  c) d)

123. The alloy of steel that is used for making automobile parts and utensils is:

 a) Stainless steel b) Nickel steel c) Tungsten steel d) Chromium steel

124. Which is used as substitute for platinum in jewellery?

 a) Rolled gold b) White gold c) Purple of Cassius d) Faraday’s gold

125. The highest oxidation state exhibited by transition metals is

 a) +7 b) +8 c) +6 d) +5

126.

 a) b) c) d)

127. The following two reactions with are given as (equations are not balanced)

In reactions and , the compounds and respectively, are

 a) b) c) d)

128. Which of the following electronic configurations belong to transition elements?

 a) KL

 b) KL

 c) KL

 d) KLM

129. The magnetic moment of a transition metal ion is BM. Therefore, the number of unpaired electrons present in it, is

 a) 3 b) 4 c) 1 d) 2

130. Which is not true in case of transition metals?

 a) They are malleable and ductile

 b) They have high melting and boiling points

 c) They crystallise with body centred cubic and hexagonal close packed structure only

 d) They show variable oxidation states although not always

131. Formation of coloured solution is possible when metal ion in the compound contains

 a) Paired electrons b) Lone pair of electrons

 c) Unpaired electrons d) None of these

132. Carbon in wrought iron is present as

 a) Silicon carbide b) Iron carbide

 c) Graphite d) Partly iron carbide and partly as graphite

133. An element is in form. Its electronic configuration is , the ion is

 a) b) c) d)

134. Each transition series contains:

 a) 12 elements b) 10 elements c) 14 elements d) 8 elements

135. Lanthanide contraction is caused due to

 a) The appreciable shielding on outer electrons by -electrons from the nuclear charge.

 b) The appreciable shielding on outer electrons by -electrons from the nuclear charge.

 c) The same effective nuclear charge from Ce to Lu.

 d) The imperfect shielding on outer electrons by -electrons from the nuclear charge.

136. The properties of Zr and Hf are similar because

 a) Both belong to -block b) Both belong to same group of Periodic Table

 c) Both have similar radii d) Both have same number of electrons

137. In nitroprusside ion, the iron and NO exist as and rather than and NO. These forms can be differentiated by :

 a) Estimating the concentration of iron

 b) Measuring the concentration of .

 c) Measuring the solid state magnetic moment

 d) Thermally decomposing the compound

138. Railway wagon axles are made by heating rods of iron embedded in charcoal powder. The process is known as

 a) Case hardening b) Tempering c) Sheradizing d) Annealing

139. A substance which is not paramagnetic is:

 a) b) c) d)

140. Which pair of compounds is expected to show similar colour in aqueous medium?

 a) b) c) d)

141. Lunar caustic is chemically:

 a) Silver chloride b) Silver nitrate c) Sodium hydroxide d) Potassium nitrate

142. Lanthanoids and actinoids resembles in:

 a) Electronic configuration

 b) Oxidation state

 c) Ionisation energy

 d) Formation of complex

143. Horn silver is:

 a) AgCl b) c) SnS d)

144. Silver nitrate solution gives a red precipitate with:

 a) Sodium iodide b) Potassium chloride c) Calcium nitrate d) Sodium chromate

145. Of the following outer electronic configurations of atoms, the highest oxidation state is achieved by which one of them?

 a) b) c) d)

146. Powdered silver ore is treated with NaCN solution and air is bubbled through the mixture to give:

 a) AgCN b) Ag c) d)

147. Chromium has most stable oxidation state of:

 a) +5 b) +3 c) +2 d) +4

148. Cuprous salts are generally colourless while cuprous oxide is:

 a) Green b) Blue c) Red d) Yellow

149. Which of the following manganese oxide is amphoteric?

 a) b) c) d) MnO

150. Impurities of Cu and Ag from gold are removed by

 a) Boiling impure gold with dil. b) Boiling impure gold with conc.

 c) Electrolytically d) Both (b) and (c)

151. Identify the incorrect statement among the following

 a) -block elements show irregular and erratic chemical properties among themselves.

 b) La and Lu have partially filled -orbitals and no other partially filled orbital.

 c) The chemistry of various lanthanoids is very similar.

 d) and -orbitals are equally shielded.

152. Which of the following ions form most stable complex compound?

 a) b) c) d)

153. Silver halides are used in photography because they are:

 a) Photosensitive

 b) Soluble in hyposolution

 c) Soluble in

 d) Insoluble in acids

154. on heating gives a gas which is also given by

 a) Heating b) Heating c) d) Na(Comp.)+

155. Gold dissolves in aqua regia forming:

 a) Auric chloride b) Aurous chloride c) Chloroauric acid d) Aurous nitrate

156. Essential constituent of an amalgam is:

 a) Fe b) An alkali metal c) Silver d) Mercury

157. In blast furnace, iron oxide is reduced by

 a) Hot blast of air b) Carbon monoxide c) Carbon d) Silica

158. In is element of actinoids series, the degree of complex formation decreases in the order

 a) b)

 c) d)

159. Stainless steel has iron and

 a) Cr b) Cu c) Co d) Zn

160. The correct statement(s) among the following is/are;

(i) All the -block elements are metals

(ii) All -block elements form coloured ions

(iii) All -block elements are paramagnetic

 a) (i) only b) (i) and (ii) c) (ii) and (ii) d) All of these

161. Which of the following pair will have effective magnetic moment equal?

 a) and b) and c) and d) and

162. Which of the following compounds volatises on heating?

 a) b) c) d)

163. Aufbau law is not valid for:

 a) Cu and Ar b) Cu and Cr c) Cr and Ar d) Fe and Ag

164. Which of the following statements is not true for Mohr’s salt?

 a) It decolourises solution

 b) It is a double salt

 c) Oxidation state of iron is +3

 d) It is a primary standard

165. The 3-block element that exhibits maximum number of oxidation states is

 a) Sc b) Ti c) Mn d) Zn

166. Number of electrons in 3-orbital of , and are 3, 4, 5 and 6 respectively. Which of the following ions will have largest value of magnetic moment ?

 a) b) c) d)

167. Identify the reaction that does not take place during the smelting process of copper extraction

 a)

 b)

 c)

 d)

168. Which of the following is most stable?

 a) b) c) d)

169. The white anhydrous copper sulphate on heating decomposes to give:

 a) b) c) d)

170. does not form complex with:

 a) AgI b) AgBr c) AgCl d) None of these

171. Which sulphide has a yellow colour?

 a) CuS b) PbS c) ZnS d) CdS

172. Which of the following is not a property of transition elements?

 a) Fixed valency b) Catalytic property c) Paramagnetism d) Colour

173. ion can be distinguished by ion by:

 a) b) c) d) None of these

174. Which one of the following transition metal ions is diamagnetic?

 a) b) c) d)

175. Elements of group 11 and 12 are:

 a) Normal elements b) Transition elements c) Alkaline earth metals d) Alkali metals

176. Hard steel contains:

 a) No carbon b) 0.6-1.5% carbon c) 5% carbon d) 0.5-0.2% carbon

177. Iron, once dipped in concentrated , does not displace copper from sulphate solution, because:

 a) It is less reactive than copper

 b) A layer of sulphate is deposited on it

 c) A layer of oxide is deposited on it

 d) None of the above

178. Which shows a jump in second ionization potential?

 a) Co b) Ni c) Zn d) Cu

179. Manganese steel contains:

 a) Fe + C + Mn b) Fe + C + Al c) Fe + Mn d) Fe + Mn+ Cr

180. Which sets are the transition elements?

 a) Ti, Zr, Hf b) V, Nb, Ta c) Rh, Rb, Pd d) All of these

181. The extraction of nickel involves:

 a) The formation of

 b) The decomposition of

 c) The formation and thermal decomposition of

 d) The formation and catalytic decomposition of

182. is:

 a) Black oxide of copper b) Copper(II) oxide c) Red oxide of copper d) Cupric oxide

183. Number of electrons transferred in each case when acts as an oxidising agent to give and , are respectively :

 a) 3, 5, 4 and 1 b) 4, 3, 1 and 5 c) 1, 3, 4 and 5 d) 5, 4, 3 and 1

184. When metallic copper comes in contact with moisture, a green power/pasty coating can be seen over it. This is chemically known as

 a) Copper carbonate-copper sulphate b) Copper carbonate-copper hydroxide

 c) Copper sulphate-copper sulphide d) Copper sulphide-copper carbonate

185. German silver is an alloy of:

 a) Copper, zinc and nickel

 b) Copper and silver

 c) Copper and tin

 d) Copper, zinc and silver

186. Incorrect statement is

 a) Atomic radii of Zr and Hf are same because of lanthanide contraction

 b) Zn and Hg do not show variable valency

 c) Across the lanthanides series, the basicity of lanthanide hydroxides decreases

 d) Protactinium is transuranic element

187. ------is the best conductor of electricity among coinage metals:

 a) Ag b) Cu c) Au d) All of these

188. ions give precipitate with . The colour of precipitate is:

 a) Blue b) Green c) Red d) Brown

189. Across the lanthanide series, the basicity of lanthanide hydroxides

 a) Increases b) Decreases

 c) First increases and then decreases d) First decreases and then increases

190. A blue colouration is not obtained when:

 a) Ammonium hydroxide dissolves in copper sulphate

 b) Copper sulphate solution reacts with ]

 c) Ferric chloride reacts with sodium ferrocyanide

 d) Anhydrous white is dissolved in water

191. Useful lanthanoid member is:

 a) Cerium b) Lanthanum c) Neodymium d) Lutetium

192. Which of the following has got incompletely filled -subshell?

 a) Gadolinium b) Lutetium c) Lawrencium d) Tantalum

193. Silver nitrate is usually supplied in coloured bottles because it is:

 a) Oxidized in air

 b) Decomposed in sunlight

 c) Explodes in sunlight

 d) Reactive towards air in sunlight

194. Mercury is purified by:

 a) Solidifying

 b) Distillation in vacuum

 c) Treatment with dil.

 d) Electrolytic method

195. Pt black is

 a) Pt metal mixed with

 b) Velvety black power obtained by reduction of with glucose or sodium formate

 c) Pt metal coated with black colour

 d) None of the above

196. ‘Hydride gap’ is referred to which region of the Periodic Table?

 a) Groups 3, 4 and 5 b) Groups 5, 6 and 7 c) Groups 4, 5 and 6 d) Groups 7, 8 and 9

197. Which of the following electronic configuration represents the maximum magnetic moment?

 a) b) c) d)

198. Volatile metals Zn, Cd and Hg are purified by:

 a) Liquation b) Distillation c) Cupellation d) Electrolysis

199. Zinc, cadmium and mercury are:

 a) -block elements b) -block elements c) -block elements d) -block elements

200. Select the incorrect statement about transition elements

 a) The last electron enters in the -orbital

 b) Their properties are in between and -block ellements

 c) Scandium is the transition element with smallest atomic radii

 d) Their common oxidation state is +3

**Time :** 13:14:00 **CHEMISTRY**

**Marks :** 3176

8.THE D-AND F-BLOCK ELEMENTS

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| **: ANSWER KEY :** |

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