AP – POLYCET

2016

Time : 2 Hours **Total Marks : 120**

SECTION – III

Chemistry

91. Which of the following salt solutions has pH greater than seven?

A. CH_3COOH

B. NH_4Cl

C. NaCl

D. CH_3COONa

92. Match the following:

a. Caustic soda	(i) $NaHCO_3$
b. Baking soda	(ii) $CaSO_4\ 2H_2O$
c. Gypsum	(iii) $CaSO_4\ .1/2H_2O$
d. Plaster of Paris	(iv) NaOH

A. (a) (b) (c) (d)
(i) (ii) (iii) (iv)

B. (a) (b) (c) (d)

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(i) (iv) (iii) (ii)

C. (a) (b) (c) (d)
(iv) (i) (iii) (ii)

D. (a) (b) (c) (d)
(iv) (i) (ii) (iii)

93. $HCl + H_20$ X $+Cl^-$. The X may be

A. H_3O^+

B. OH^-

C. HOCl

D. H_2O^+

94. The maximum number of electrons accommodated in a subshell with azimuthal quantum number *l* is

A. $2l+1$

B. $4l+2$

C. $l\ (l+1)$

D. $4l-1$

95. The four quantum numbers for valence electron of sodium atom are

A. n=1, $l = 0$, m 0, s = 1/2

B. n=2, $l = 0$, m- 0, s= 1/2

C. n = 3, $l = 0$, m = 0, s =1/2

D. n = 3, $l = 1$, m = 0, s = 1/2

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96. Degenerate orbitals have
    A. same *l* value and same n value
    B. different I value and same n value
    C. same *l* value and different n value
    D. same (n + *l*) value
97. Which pair of elements fits into same slot in Newlands' table of elements?
    A. F, Cl
    B. Co, Ni
    C. Mg, Ca
    D. C, Si
98. As per the modern periodic law, the properties of the elements are periodic functions of their
    A. atomic weights
    B. mass numbers
    C. atomic numbers
    D. valences
99. Elements of which group are called halogens?
    A. VA
    B. VIA
    C. VIIA
    D. IVA

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100. Which of the following elements has larger atomic size?
    A. Na
    B. Mg
    C. Ca
    D. K
101. The correct order of electronegativity in the following elements is
    A. F>Cl>O
    B. F>O>CI
    C. O> F > CI
    D. Cl > F >O
102. The ionic bond forms easily between which groups of elements?
    A. IA and VIIA
    B. IIA and VA
    C. IA and VA
    D. IIA and VIA
103. Which of the following is a covalent compound?
    A. NaCI
    B. NH_3
    C. $MgCl_2$

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D. LiF

104. The bond angle in BF_3 molecule is

A. 120^0

B. 180^0

C. $109^028'$

D. 104^0

105. The π bond is not found in

A. C_2H_4

B. O_2

C. N_2

D. H_2O

106. The type of hybridization in CH4 molecule is

A. sp

B. sp^2

C. sp^3

D. sp^3d

107. The ore Fe_3O_4 is called Fe

A. magnetite

B. magnesite

C. haematite

D. pyrolusite

108. $2\ ZnS + 3O_2 \rightarrow 2\ ZnO + 2S0_2$ This reaction is an example for

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A. smelting
B. calcination
C. reduction
D. raosting

109. Which of the following processes is not suitable for refining of metals?
A. Poling
B. Distillation
C. Electrolytic refining
D. Froth floatation

110. Which of the following is a saturated hydrocarbon? Oi e.oZ as.164 Ip_tdsoyw?
A. C_2H_4
B. C_2H_2
C. C_3H_6
D. C_2H_6

111. CH_3 —NH—CH_3 is known as
A. primary amine
B. tertiary amine
C. secondary amine
D. quaternary ammonium salt

112. The IUPAC name of the compound CH_3 — CH=CH=H_2

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A. but-3-ene-1-yne
B. buta- 1, 2-diene
C. buta-2,3-diene
D. buta diene

113. Which of the following substituted products is not formed when methane reacts with chlorine in sunlight?
A. Chloroform
B. Carbon tetrachloride
C. Methylene chloride
D. Ethyl chloride

114. The process of conversion of starch and sugar into ethanol by using enzymes is called
A. fermentation
B. esterification
C. carbonization
D. pyrolysis

115. The general formula of ester is
A. R--0--R
B. R—CO--R
C. R—COOR
D. R—CHO

116. The chemical formula of marble is

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A. $CaCO_3$

B. $Ca(OH)_2$

C. CaO

D. $Ca(HCO_3)_2$

117. NaCI + $AgNO_3$ →4 AgCl↓ + $NaNO_3$ is an example for

A. chemical combination

B. chemical decomposition

C. displacement reaction

D. double displacement reaction

118. Coating the iron metal surface with a thin layer of zinc to protect the rusting of iron is called A. greasing

B. galvanizing

C. tinning

D. electroplating

119. x Na + y H_2O → 2NaOH + H_2. In this balanced equation, the x, y values respectively are

A. 1, 1

B. 2, I

C. 1, 2

D. 2, 2

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120. Which of the following solutions converts red litmus paper to blue?

A. HCI

B. HNO_3

C. NaOH

D. None

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