

AP & TS

# Sec: SR CAO\_NAZ Date: 03-10-2022

# Time: 3hrs EAMCET MODEL Max.Marks:160

 **Name of the Student: I.D. NO:**

# MATHS IIA

# 1. If is a poisson variate such that then the parameter is

# 1) 2 2) 4 3) 5 4) 3

# 2. For a Poisson variate x, then variance of

# 1) 1 2) 2 3) 3 4) 4

# 3. The probability that atmost 5 defective fuses will be found in a box of 200 fuses if experience shows that 2% of such fuses are defective

1)  2)  3)  4) 

4. A box contains 3 red marbles and 2 white marbles, A marble is drawn and replaced 3 times from the box, the probability that exactly one red marble is

1) 3/5 2) 9/125 3) 36/125 4) 6/125

5. The probability that in a family of 4 children there will be atleast one boy is

1) 13/16 2) 15/16 3) 14/16 4) 12/16

6. A random variable takes the values 0, 1, 2. If  and  then the mean value of the random variable

1) 0.3 2) 0.6 3) 0.9 4) 0.5

7. If  is a probability mass function, then the value of c

1) 1/4 2) 1/3 3) 1/2 4) 1/6

8. Four numbers are chosen at random from  the probability that they are not consective is

1)  2)  3)  4) 

9. Three numbers are chosen at random from  the probability that minimum of chosen number is 3 or maximum is 7

1) 11/30 2) 11/40 3) 1/7 4) 1/8

10. A and B are two events such that  and  then 

1) 2/5 2) 3/5 3) 4/5 4) 1/5

11. A speaks truth in 75% of the cases and B in 80% of the cases. The percentage of cases they are likely to contradict each other in making the same statement

1) 25% 2) 35 % 3) 50% 4) 65%

12. The mean weight of 9 items is 15. If one more item is added to the series the mean becomes 16. The value of 10th item is

1) 35 2) 30 3) 25 4) 20

13. If the mode of a data is 18 and the mean is 24, then median

1) 18 2) 24 3) 21 4) 22

14. If the standard deviation of 0, 1, 2, 3….9 is k, then the standard deviation of 10,11,12,…..19

1)  2)  3)  4) 

15. The minimum value of  is

1) 11 2) 21 3) 31 4) 42

16. If the mean of the numbers  is 82 then the mean of 

1) 75 2) 50 3) 25 4) 30

17. A father with 6 children takes 3 at a time to a park without taking the same children. How often father goes to the park

1) 14 2) 16 3) 18 4) 20

18. The number of quadratic expressions with the coefficients drawn from the set 

1) 4! 2)  3)  4) 

19. The greatest number of points of intersection of 8 lines and 4 circles

1) 103 2) 104 3) 102 4) 101

20. If the expression  can be expressed as a perfect square, then m

1) 8/3 or 4 2) -8/3 or 4 3) 4/3 or 8 4) -4/3 or 8

21. The number of real solutions of the equation 

1) 2 2) 0 3) 1 4) 3

22. If x is real, the value of  lies in the interval

1)  2)  3)  4) 

23. The greatest integer satisfying  and 

1) -3 2) -2 3) -1 4) 1

24. If one root of  is sum of the other two roots then k

1) 0 2) 1 3) 2 4) 3

25. The equation whose roots are cubes of the roots of  is

1)  2) 

3)  4) 

26. The order of the multiple roots of 2 of the equation 

1) 1 2) 2 3) 3 4) 4

27. The number of positive roots of 

1) 0 2) 2 3) 1 4) 3

28.  then 

1) 2 2) 1/2 3) 1/3 4) 1/4

29. The number of partial fractions of  is

1) 2 2) 3 3) 4 4) 5

30. The number of ways can 5 things be divided between A and B so that each receive atleast one thing is

1) 31 2) 32 3) 34 4) 30

31. The number of ways of selecting atleast one litter from litters of the word “PROPORTION”

1) 287 2) 286 3) 288 4) 289

32. The number of four digit numbers that can be formed with 0,1,2,3,4,5 is

1)  2)  3)  4) 

33. If  then r value\_\_\_\_

1) 4 2) 3 3) 5 4) 2

34. If A, B are independent events  then 

1) 5/12 2) 7/12 3) 11/2 4) 1/3

35. A litter is taken out at random from the word “ASSISTANT” and another from “STATISTICS”. The probability that they are the same letter

1) 13/90 2) 17/90 3) 19/90 4) 15/90

36. The probability of obtaining 2 heads when an unbiased coin is tossed 5 times

1) 5/8 2) 4/9 3) 5/16 4) 4/16

37. Out of 800 families, 4 children each the expected number of families having 2 boys and 2 girls is

1) 100 2) 200 3) 300 4) 400

38. A coin is tossed n times, if the probability that 4, 5, 6 heads occur are in A.P then 

1) 10 2) 11 3) 14 4) 12

39. The mean of 100 items is 49, It was discovered that three items which should have been 60, 70,80 were wrongly read as 40,20,50 respectively, then correct mean

1) 40 2) 50 3) 60 4) 70

40. The equation of fourth degree with rational coefficients one of whose roots  is

1)  2)  3)  4) 

**MATHS-IIB**

41. If the vertex of the parabola is (-3, 0) and the directrix is , then its equation is

1)  2)  3)  4) 

42. The length of the latus rectum ‘of a conic is 5. Its focus is (-1, 1) and its directrix is  then the conic is

1) Parabola 2) Ellipse 3) Hyperbola 4) Rectangular hyperbola

43. Equation of the parabola with focus (3,-4) and directrix  is

1)  2) 

3)  4) 

44. Equation of the parabola having focus (3, 2) and vertex (-1,2) is

1)  2) 

3)  4) 

45. The focus of a parabola is (1,2) and the point of intersection of the directrix and axis is (2,3). Then the equation of the parabola

1)  2) 

3)  4) 

46. The equation of parabola whose latus rectum is 2 units, axis of line is  and tangent of the vertex is is given by

1)  2) 

3)  4) 

47. If the equation  represents a parabola then its axis is

1)  2)  3)  4) 

48. The value of ‘P’ such that the vertex of  is ‘4’ units above the x-axis is

1) 2 2)  3) 5 4) 

49. The locus of the points of trisection of the double ordinates of the parabola  is

1)  2)  3)  4) 

50. The length of the latus rectum of the parabola  is

1) 14/13 2) 7/13 3) 28/13 4) 56/13

51. The ends of latus rectum of a parabola are (-3,1) and (1,1) then one of the equation of parabola is

1)  2)  3)  4) 

52. The length of the double ordinate of the parabola  which is at a distance of

32 units from vertex is

1) 28 2) 30 3) 32 4) 26

53. The graph represented by the equation  is

1) A portion of a parabola 2) A parabola

3) A part of sine graph 4) A part of hyperbola

54. The length of focal of parabola makes an angle with the x-axis is

1)  2)  3)  4) 

55. Ends of the double ordinate of  which is at a distance of ‘8’ units from the vertex is

1)  2)  3)  4) 

56. The focal distance of a point on the parabola  is 10 its coordinates are

1)  2)  3)  4) 

57. Equation of the tangent at the vertex of the parabola  is

1)  2)  3)  4) 

58. The axis of symmetry of the conic  is

1)  2)  3)  4) 

59. Equation of the focal chord of the parabola  inclined an angle  with the x-axis is

1)  2)  3)  4) 

60. If  are the extremities of a focal chord of the parabola  then 

1) 2 2) 0 3) 1 4) -2

61. If the two circles  and  have equal radius then locus of  is

1)  2)  3)  4) 

62. The equation of the tangent to the circle  with slope ‘2’ is

1)  2)  3)  4) 

63. If  and  are conjugate lines w.r. to circle  then 

1)  2)  3)  4) 

64. ABCD is a square with side ‘a’. If AB and AD are taken as positive coordinate axes then equation of circle circum scribing the square is

1)  2) 

3)  4) 

65. If the circles  and  have exactly three real common tangents then 

1) 5 2) 4 3) 8 4) 6

66. If the circle  touches the circle  externally and cuts the circle orthogonally then 

1) -49 2) -52 3) -59 4) -65

67. Radical centre of, and  is

1)  2)  3)  4) 

68. 

1)  2)  3)  4) 

69. 

1)  2)  3)  4) 

70. 

1)  2)  3)  4) 

71.  then 

1)  2) 

3)  4) 

72. 

1)  2) 

3)  4) 

73. 

1)  2)  3)  4) 

74. 

1)  2)  3)  4) 

75. 

1) 3/2 2) 5/2 3) 4 4) 2

76. The area bounded by the ellipse  with the coordinate axes in sq. units

1)  2)  3)  4) 

77. Area of the region  is

1)  2)  3)  4) 

78. If m and n order and degree of the equations  then (m,n) is

1)  2)  3)  4) 

79. The solution of 

1)  2)  3)  4) 

80. Integration factor (I.F) of 

1)  2)  3)  4) 

**PHYSICS**

# 81. A Positron and A Proton are accelerated by the same accelerating potential. Then the ratio of the associated wavelengths of the positron and the Proton Will Be [M=mass Of Proton, m=mass Of Positron]

1) 2) 3) 4)

82. The frequency of a photon associated with an energy of 3.31 eV is (given h=6.6210-34 Js)

1)0.8 1015Hz 2)1.6 1015 Hz 3) 3.2 1015 Hz 4) 8.0 1015 Hz

83. A photoelectron is moving with a maximum velocity of 106 m/s. Given e=1.610-19c, and m=9.110-31 kg, the stopping potential is

1) 2.5 V 2)2.8 V 3)2.0 V 4)1.4 V

84. Two photons of energies twice and thrice the work function of a metal are incident on the metal surface. Then the ratio of maximum velocities of the photoelectrons emitted in the two cases respectively, is

1) ː1 2) ː1 3) ː 4) 1ː

85. If the uncertainity in the position of an electron is 10-10 m, then the value of uncertainity in its momentum (in kg-ms-1) will be

1) 3.3310-24  2) 1.0310-24  3) 6.610-24  4) 6.610-20

86. In Davisson –Germer electron diffraction arrangement is suppose the voltage applied to accelerate electrons is increased the value of angles at which diffracted beam have the maximum intensity

1) Will be larger than the earlier value. 2) Will be the same as the earlier value.

3) Will be less than the earlier value. 4) Will depend on the target.

87. Threshold wavelength for a metal having work function w0 is λthen the threshold wavelength for the metal having work function 2 w0 is

1) 4 2) 2 3) 4)

88. Photons of frequencies 2.21015 Hz and 4.6 1015 Hz are incident on a metal surface. The corresponding stopping potentials were found to be 6.6 V and 16.5 V respectively.

Given e=1.6 10-19 C, the value of universal Planck’s constant is

1)6.6 10-34 Js 2) 6.7 10-34 Js 3) 6.5 10-34 Js 4) 6.8 10-34 Js

89. A metal of work function 4eV is exposed to a radiation of wavelength 140-9m. Then the stopping potential developed by it (h=6.6310-34Js and c=3×108m/s)

1) 6.42 V 2) 2.94 V 3) 4.86V 4)3.2V

90. In Rutherford experiments on -ray scattering the number of particles scattered at 900 be 28 per minute. Then the number of particles scattered per minute by the same foil but at 600 are

1) 56 2) 112 3) 60 4) 120

91. The radius of shortest orbit in one electron system is 18 pm. It may be.

1)11H 2) 21H 3) He+ 4) Li+

92. Find the frequency of revolution of the electron in the first stationary orbit of H-atom

1) 61014Hz 2) 6.61010Hz 3) 610-10Hz 4) 61015Hz

93. Let the potential energy of a hydrogen atom in the ground state be zero. Then its energy in the first excited state will be

1) 10.2 eV 2) 13.6eV 3) 23.8eV 4) 27.2Ev

94. If 13.6 eV is the energy required to separate a hydrogen atom into a proton and an electron then its orbital radius is

1) 510-11m 2) 510-12m 3) 710-13m 4) 710-14m

95. The value of wavelength radiation emitted due to transition of electrons from n=4 to n=2 state in hydrogen atom will be

1) 2) 3) 4)

96. Calculate the nearest distance of approach of an α-particle of energy 2.5 Me V being scattered by a gold nucleus (Ζ=79)

1) 910-14 2) 910-13 3) 910-12 4) 910-10

97. The ratio between total acceleration of the electron in singly ionized helium atom and hydrogen atom (both in ground state) is

1)1 2)8 3)4 4)16

98. According to Bohr’s theory, the ratio of the times taken by the electron in hydrogen atom to complete one revolution in orbits corresponding to ground and first excited state is

1)1:4 2) 4:1 3)1:8 4)8:1

99. What is the angular momentum of an electon in Bohr’s hydrogen atom whose energy is-3.4eV?

1)  2)  3)  4) 

100. The number of revolutions done by an electron in one second in the first orbit of hydrogen atom is

1)6.571015 2)6.571013 3)1000 4)6.571014

101. When a string fixed at its two ends vibrates in 1 loop, 2 loops, 3 loops and 4 loops, the frequencies are in the ratio

1)1:3:5:7 2)1:2:3:4 3)1:5:9:13 4)3:7:11:15

102. A closed organ pipe is vibrating in first overtone and is in resonance with another open organ pipe vibrating in third harmonic the ratio of lengths of the pipes respectively is

1)1:2 2)4:1 3)8:3 4)3:8

103. If ij represents refractive index when a light ray goes from medium i into j, then

21 32 4µ3 is equal to

1) 3µ1  2)3µ2  3) 4) 4µ2

104. A double convex lens is made of glass which has refractive index 1.55 for violet rays and 1.50 for red rays. If the focal length of violet rays is 20 cm, the focal length of red rays is

1) 9 cm 2) 18 cm 3)20 cm 4) 22 cm

105. Two coherent sources of different intensities send waves that interfere. The ratio of maximum to minimum intensity is 25. The intensity ratio of the sources is

1) 25:1 2) 5:1 3)9:4 4) 625:1

106. A light ray is incident on a transparent medium of = 1.732 at the polarising angle. The angle of refraction is

1) 600 2) 300  3) 450 4) 900

107. The objective of a terrestrial telescope has focal length of 120 cm and diameter 5 cm. The focal length of the eye piece is 2 cm. The magnifying power of telescope for distant object is

1) 12 2) 24 3) 60 4) 300

108. The focal length of objective and eye lens of a microscope are 4 cm and 8 cm respectively. If the least distance of distinct vision is 24 cm and object distance is 4.5 cm from the objective lens, then the magnifying power of the microscope will be

1) 18 2) 32 3) 64 4) 20

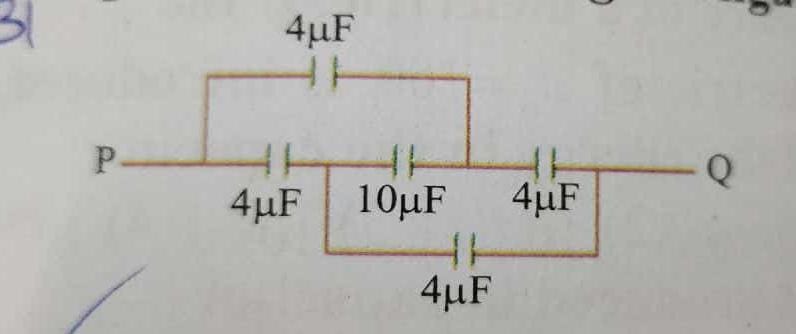
109. An electric dipole is along a uniform electric field. If it is deflected by 600, work done by an agent is 2×10-19 **J**. Then the work done by an agent if it is deflected by 300 further is

1) 2.5×10-19  **J** 2) 2×10-19  **J** 3) 4×10-19  **J** 4) 2×10-16  **J**

110. Two charges when kept at a distance of 1m apart in vacuum have some force of repulsion. If the force of repulsion between these two charges be same, when placed in an oil dielectric constant 4, the distance of separation is

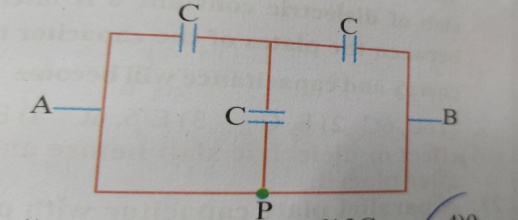
1) 0.25m 2) 0.4m 3) 0.5m 4) 0.6m

111. The effective capacitance between the point P and Q in the given figure is



1) 4F 2) 16F 3) 26F 4) 10F

112. Three capacitors are arranged as shown in figure. Find the equivalent capacity across the points A and B

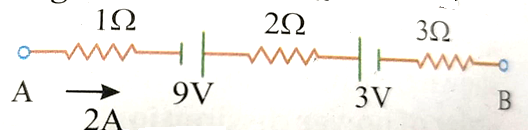


1) C 2) 2C 3) 3C 4) 0

113. A copper wire of cross-sectional area 2.0 mm2, resistivity=1.7×10-8 ꭥ m, carries a current of 1A. The electric field in the copper wire is

1) 8.5×10-5V/m 2) 8.5×10-4V/m 3) 8.5×10-3 V/m 4) 8.5×10-2 V/m

114. The potential difference between A & B in the given branch of a circuit is



1) 6V 2) 12V 3) 9V 4) 0V

115. The magnetic induction field strength at a distance 0.3 m on the axial line of a short bar magnet of moment 3.6 Am2 is

1) 4.5×10-4 T 2) 9×10-4 T 3) 9×10-5 T 4) 2.6×10-5 T

116. The magnetic induction at a distance ‘d’ from the magnetic pole of unknown strength ‘m’ B. If an identical pole is now placed at a distance of ‘2d’ from the first pole, the force between the two poles is

1) mB 2) mB/2 3) mB/4 4) 2mB

117. A current of 1/4π A is flowing in a long straight conductor. The line integral of magnetic induction around a closed path enclosing the current carrying conductor is

1) 4π×10-7 Wb/m 2) 10-7 Wb/m 3) 16π2×10-7 Wb/m 4) Zero

118. The flux linked with a coil is 0.8 Wb when a 2 A currentis flowing through it. If this current begins to increase at the rate of 400 A/s, the induced emf in the coil will be

1) 20 V 2) 40 V 3) 80 V 4) 160 V

119. In case of ACcircuits the relation V=iZ, where Z is impedance, can directly applied to

1) peak values of voltage and current only 2) rms values of votage and current only.

3) instantaneous values of voltage and current only 4) Both 1 and 2 are true

120. The series RLC circuit is resonance is called:

1) Seector circuit 2) rejector circuit3) amplifier circuit 4) oscillator circuit

**CHEMISTRY**

121. Haloform reaction is not given by

1) CH3COCH3 2) CH3COC2H5 3) C6H5CO C2H5 4) CH3CH(OH) )CH3

122. Iso propyl alcohol on oxidation forms

1) Acetone 2) Propionic acid 3) Acetic acid 4) Propene

123. The percentage of formaldehyde in formalin is

1)40% 2)10% 3)20% 4)5%

124. The alkene which on ozonolysis gives acetaldehyde and acetone is

1)CH3- CH=C- CH3

│

CH3

2)CH3- CH= CH- CH2- CH3

3)CH2= CH- CH3

4)(CH3)2 C = C(CH3)2

40% H2SO4 Isomerisation

125. CH3- C ≡ CHA CH3- C- CH3

1%HgSO4 ║

O

Structure of A and type of isomerism in the above reaction are respectively.

1)Prop-1-en-2-ol , metamerism 2)Prop-1-en-1-ol , tautomerism

3) )Prop-2-en-2- ol , geometrical isomerism 4) )Prop-1-en-2-ol, tautomerism

126. The reaction in which > C=O group changes to > CH2

A) Clemmenson’s reduction B)Wolf-Kishner reduction

C) Aldol condensation D)Rosenmund’s reduction

1)A &B Only 2)B&C Only 3)A&D Only 4)A,B,C,D

127. The reagent which does not react with both acetone and benzaldehyde.

1)Sodium hydrogensulphite 2)Phenyl hydrazine

3)Fehling’s solution 4)Grignard reagent

128. In the given reaction

OH OH

│ │ HIO4

CH3CH – C(CH3)2 A + B

(A) And (B) respectively are

1) CH3CHO , CH3CHO 2) CH3COCH3, CH3CHO

3) CH3COCH3 , CH3COCH3 4) CH3COOH, CH3COCH3

129. The acid present in red ants is

1)HCOOH 2)C6H5COOH 3)CH3COOH 4)CH3- CH-COOH

│

OH

130. In the following reaction ,X and Y are respectively:

Δ

CH3COOH+NH3  X y + H2O

1)CH3CONH2 , CH4

2)CH3CO ONH4 , CH3CONH2

3) CH3CONH2 , CH3COOH

4) CH3NH2 , CH3CONH2

131. Which of the following compounds does not have a carboxyl group?

1)Methanoic acid 2)Ethanoic acid 3)Picric acid 4)Benzoic acid

132. HVZ Reaction is not given by

CH3- CH –COOH

1) │ 2)CH3 – CH2 – COOH 3) CH3 – COOH 4)HCOOH

CH3

aqKOH

133. C2H5Cl A

∆

CH3COOH + A → B , IUPAC name of ‘B’

1)Ethyl propanoate 2) Ethyl acetate 3)Ethyl ethanoate 4)Ethylmethanoate

134. IUPAC name of CH3(CH2)2 NH2  is

1)1- Propanamine 2) 2- Methylamine 3)Iso – propylamine 4)20– Propylamine

135 Primary amines can be distinguished from other amines by the following test.

1)Tollen’s 2)Schiff’s 3)Carbyl amine 4)Fehling

136. The source of nitrogen in Gabriel synthesis of amines is …..

1)sodium azide, NaN3 2)sodium nitrite ,NaNO2

3)potassium cyanide , KCN 4)potassium phtalamide , C6H4(CO2)N-K+

137. Which of the following not an example of Sandmayer’s reaction

1)Benzene diazonium chloride with Cu2Cl2 / HCl , ∆

2) Benzene diazonium chloride with Cu2Br2 / HBr, ∆

3) Benzene diazonium chloride with Cu2( CN )2 /KCN,∆

4) Benzene diazonium chloride with Cu,HCl

NH3 HNO3

138. C6H5Cl X : X Z : X+Z A : the no of σ and π bonds in ‘A’ are Cu2O,2000C 0-50C

1)25σ,6 π 2) 25σ,7 π 3) 27σ,7 π 4) 27σ,6 π

139. Which one of the following functional groups undergoes hydrolysis with alkali to yield an acid group

1) –CHO 2) –CN 3) –COCH3 4) –Br

140. The IUPAC name of the fallowing compound is

CN

NO2

1) 3-nitro benzene nitrile 2) 3-nitro benzonitrile

3) 3-cyano-1-nitro benzene 4) 1-nitro-3-cyano benzene

141. Atomic number of a transition metal is 25 then its magnetic moment in its +3 oxidation state is

1)1.73BM 2)2.84BM 3)4.9BM 4)5.9 BM

142. Many transition metals from interstitial compounds. The characteristics of these interstitial compounds are

I) They have low melting points II) They are very hard

` III) They retain metallic conductivity

IV)They are chemically more reactive than the pure metals

1)II, III only correct 2) I, III only correct 3) II, IV only correct 4) IV only correct

143. PCl5 + Cl- PCl-6 . the wrong statement regarding the above equation is

1) Hybridisation of P changes SP3d to SP3d2

2) Oxidation number of P changes from +5 to +6

3) Covalency of P changes from 5 to 6

4) Here PCl5 is a Lewis acid.

144. The gases evolved in the decomposition of lead nitrate are ;

1) N2O3, NO 2) NO2,O2 3) N2O3, O2 4) N2O5, O2

145. Which of the fallowing turns lead acetate paper black?

1) SO2 2) SO3 3) H2S 4) H2SO4

146. A gas which bleaches substances by reduction process is

1) Moist Cl2 2) SO2 3) O3 4) Dry Cl2

147. 2Br- + X2 Br2 +2X- . In this reaction X2 is

1) Cl2 2) Br2 3) I2 4) N2

148. Hybridisation of chlorine atom in ClO- , ClO-2, ClO-3 and ClO-4 respectively

1) SP2, SP2, SP2, SP2, 2) SP, SP, SP, SP 3) SP3, SP3, SP3, SP3 4) SP, SP2, SP3, SP2

149. Which of the fallowing two are isostrucctural?

1) XeF2 , IF-2 2) NH2 , BF3 3) NH2 , BF2 4) PCl5 , ICl5

150. Beacon lights are obtained from

1) Neon lamps 2) Tungston lamps 3) Hydrogen lamps 4) Xenon lamps

151. Freundlich adsorption isotherm is given by the expression x/m=kp1/n. then the slop of the line in the following plot is

Log x/m

Log ‘P’

1) 2)1/n 3) x/m 4) p

152. Which one has the highest coagulation power?

1) K+ 2)Ca2+ 3)Al3+ 4)Sn4+

153. Concentration terms which are independent of temperature is/are

1) Mole fraction and molality 2) Mole fraction and morality

3) Only normality 4) Only molarity

154. KH value for Ar(g) , CO2 (g) , HCHO (g) and CH4 (g) are 40.39 , 1.67, 1.83 x 10-5 and 0.413 respectively.

Arrange these gases in the order of their increasing solubility.

1) HCHO < CH4  < CO2 < Ar 2) HCHO < CO 2,< CH4 < Ar

3) Ar < CO 2 < CH4 < HCHO 4) Ar < CH4 < CO2 < HCHO

155. For a reaction 2A+3B→ Products, the rate law expression is given by rate = K (A)1 (B)2 The order of the reaction with respect to A,B and over all order of reaction are

1) 1,2,1 2)3,2,1 3)1,2,3 4)2,1,3

156. SOCl2 →SO2 +Cl2 is a first order gas reaction with K = 2.2x10-5 Sec-1 at 3200 C.

The percentage of SO2Cl2 decomposed on heating for 90 minuits is :

1) 1.118 2) 0.1118 3) 18.11 4) 11.18

157. The electrochemical equivalent of an element is 0.001118 gm/columb. Its equivalent weight is

1)10.7 2)53.5 3)1007 4)107

158. Equivalent conductance at infinite dilution of BaCl2, H2SO4 and HCl aqueous solution are x1 ,x2 and x3 respectively. Equivalent conductance of BaSO4 solution is

1)x1+ x2 -x3 2)x1- x2 -x3 3) x1+ x2 -2x3 4) x1- 2x2 -x3

159. The crystal system of a compound with unit cell dimensions a= 0.387 , b = 0.387 and c = 0.504 nm and α = β = 900 and γ = 1200 is

1)cubic 2)hexagonal 3)orthorhombic 4)rhombohedral

160. At zero Kelvin, most of the iconic crystals possess

1)Frenkel defect 2)Schottky defect 3) Metal excess defect 4) No defect

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| **PAPER SETTER: BHIMAVARMA BOYS CAMPUS** | | |
| **FACULTY NAME** | **SUBJECT** | **PH NO** |
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| **RAJESH SIR** | **MATHS-2B** | **9701928064** |
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