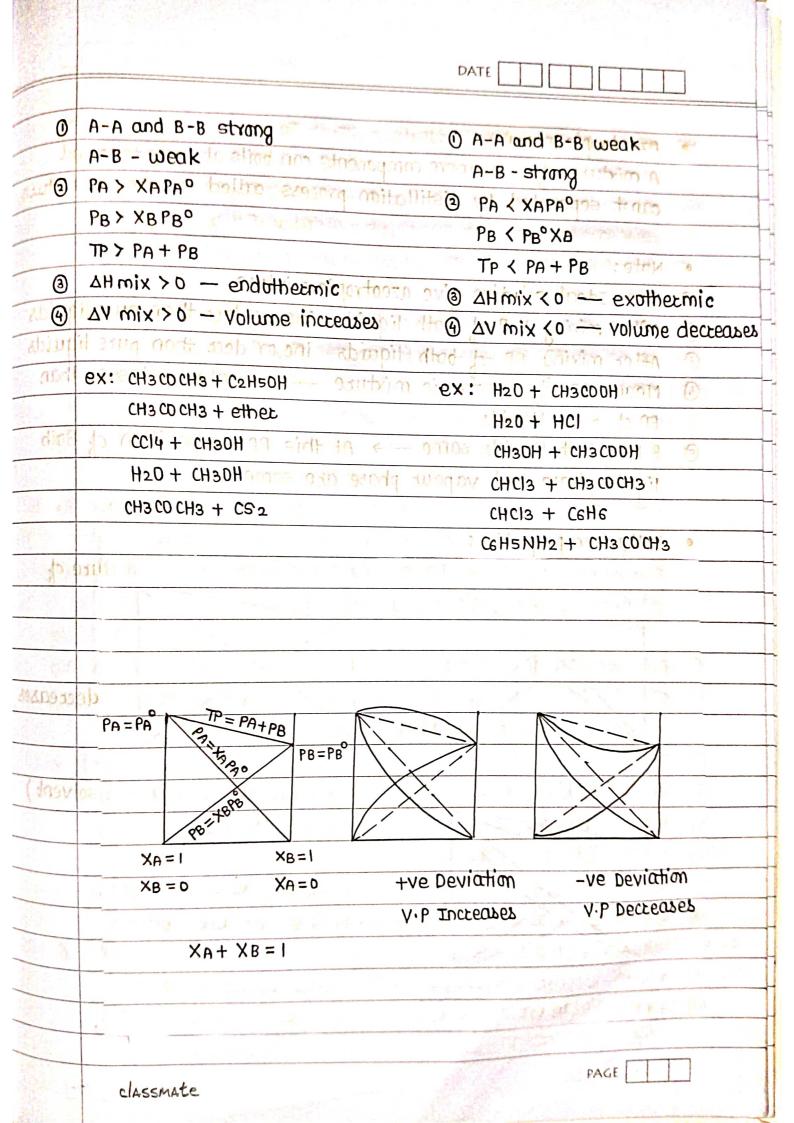
E STATE OF THE STA	Solutions DATE DATE
	Xgas = ngas
•	solubility of gas in liquid: (Herry's law)
②	KH & 1 X C P.P & solubility (1) Charter 1 6
	solubility P.P & mole Praction of gas PP
	PP = KH X gas
	sogx purtamanue all in the secretarion of the invarianting Xgas
3	KH = Henry's constant of gas = 3 slope = KH = tano
	pepends on nature of gas of the apple of
	- And a superior with the second of the seco
A Company	THE US HO KHICK TEMP MOVIE OF THE STATE KHIS DOWN THE
	the course of calabate by an installation
•	Factors affecting solubility of Gas: Temp
1	EU
0	Nature of gas: Order of solubility
	S03 > S02 > CH4 > NH3 > HC1 > 02/N2 > H2 > He
3	Nature of solvent & Dielectric constant & Polarity
3	Temp ≈ 1
	solubility • Limitations of Henry's law:
<u>(4)</u>	
1	PP & solubility @ Gras dissolved in liq
	3 Ideal gas Behaviour
•	solubility of liquid 9 V.V small amount of gas
	in liquid: solubile in liq
0	Evaporation: liquid -> Vapout Leva = Leond
<u> </u>	condensation: Vapour -> liquid (at equilibrium state)
3	At equilibrium pressure exerted by vapours on the surface area
	of liquid when both liquid and vapour Both are at equilibrium
	V
	Vapour pressure -> Depends only on the Temperature
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			DATE
	two bounts of rapour bress	According to the second	himpile stitular day post post
0	To alocad (seems)		
0			TARREST STORES TO A STORE STORES
2	Deponds of Target	19	T-W = A7
3	bepences on temp and not	ture of	liquid.
9	ohen reser - eroborat	im	A THE PARTY IN THE
	crosed resser -> Both e	noboxa	tion and condensation
5	Temp & K.E.	6 At	Higher attitude
13.2	K.E = 3 UST -	41P =	low of the world
	11178 112 11 8 15 7M -	[→] B·P	(H2D) < 100°C + 100°C
T	In pressure cooker	cooking	time For Food \longrightarrow B·P (H2D) \uparrow
			d Park Hover Aber
8	During eva/conder ->	vo. of i	nolecules on the surface area
			constant. ************************************
9] = 21 atm 13/160 mi to 22 out
	B.P & Notules 1	oht t	ollos si anothertiones je collos
	V·P		
	H20 —188°C	The same of the sa	P — High VP — Volatile liquid
	CH30 CH3 - 38,C		- Low VP - Non-Volatile liquid
	C6H6 65'C		and bluene pil A the 1
	C2H50H 85'C A (1)		ST 9 11 13 9
	C6H5NH2 - 225°C		\otimes \otimes \otimes \otimes \otimes \vee
	Pu = XaPu		$\int \int d^2 t dt \int d^2 t dt$
	81+19=41 0		emily of has been a
0	BP ordet = vim VA (+)	\uparrow	
	Z> Y> X = xim (1)	P	acity a Lieby now
2	VP ordet		noith ivad gricuoda
	z <y<x< th=""><th></th><th></th></y<x<>		
	D - Va _Deviction	à	$B \cdot P(x) B \cdot P(y) B \cdot P(z) $
	V-P Decredades		Temp 4.V
	classmate		PAGE

		DATE	
	Mixing of two volatile liquid	s (Roults Law	1) v ja slaing amt +
	THATIS OF LOO VOICETTO IT GOODS	The second secon	and the Park and
	Vapour state	PA - partio	d pressure of A a 6
	PA = YATP		d pressure of BIV
- Adding	PB = YBTP bupil		
	Liquid state	PB ⁰ - V·P. c	t pure liquid B
	PA = XA PA COLONIA DO MIL	XAN- ME	of A in liquid state
	PB = XBPB° obutiles sorpill	XB — MF	of B in liquid state
_	Daltons law of PP		
	TP sum of the PPI > (usl)	y _B - MF	of B in Vap state
1	time for Food 89+1A9 (=9T)	itotal M·F = 1	In pressure woke
	TP = XAPA° + XBPB°		
J.	molecules on the surface use		
•		- \	
	The solution which obeys R		xactly over entire yan
	of concenterations is called		
	-0		9.V
t	Dupil 9 HA-A- 7/ B-B	nixed	H20 - Och
e liquid	110107-11A- 770B -	98 dpiH	AB solution (H)
	A and B lig should have	<u> </u>	(Ideal solution)
	O same FG		A-A = B-B = A-B
artz i	2 Same IMFA	• ②	PA = XAPAO M alla)
	3 same nature	1	PB = XBPB°
	9 same interactions	(3)	TP = PA + PB
1		9	$\Delta V \min_{x \in \mathcal{X}} = 0 \text{ for } 98$
•	Non Ideal Solutions	5	
	showing peviation		V ordes and
	Silver de la company de la com	As a salkerily &	
0	+ve Deviation (2)	② -ve	Deviation
J	V.P increases met		Decreases
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•	Azeotropic mixture: Orunna - Engrant 8-8 hor and O			
	A mixture of 2- or more components can boils at same temp and			
	can't seperated by distillation process amed Hzentopic inixing			
	To box and a supplementation of the Control of the			
•	Note: 18 bal > 9T and life in 18 that for			
oi(0)	Non-Ideal solution give azeotropic mixture - 0 < vinus 6			
19409502	after mixing xv.Pvol both liquids increased than puteliquias			
3	After mixing BP of both liquids incor dece than pure liquids			
4	3 Means BP of Azeotropic mixture - Greater or lesser than			
12	BP of pure liquids			
(5)	B. P. of both-liquids same - At this BP composition of Both			
f	liquid phase and vapour phase are same!! 0 = H) + 0 = H			
	CH3 CO CH3 + CE2 CHC13 + CEH6			
•	colligative properties:			
	Properties depends on. No. of solute particles but not nature of			
	solute is called colligative properties.			
0	Relative lowering of V.P:			
	on addition of Non volatile solids solute, V.P of solvent decrease			
	called lowering of vapour pressure.			
1				
a)	LVP = Ps - Po (Ps = Vapour P of solution / Po = Vapour P of solvent)			
b)	RLVP = LVP = PO PS (Value Increases)			
i i i	po Po			
c)	RLVP = X solute - According to Routs law			
d)	PO-PS = D - Find PO/PS/LVP/ RLVP			
- 3	PO N			
e)	po-ps = wt x M·wt - Aind M·wt of solute			
-)	po m.wt Wt			
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T	DATE		
£)	PO-PS = m x M·wt m-molality mine with mo		
3	PO 1000 1720 =		
東 •	Elevation of BP (1276) + Table		
	on addition of Non volatile solute, V.P of solvent decreases		
	so BP of solution increases called elevation of B.P		
	Tbs > Tb°		
0	ΔTb = Tbs-Tb° (Tbs = B.P of solution / Tb° = B.P of pute solvent)		
2	ΔTb = Kbm Kb= Ebullioscopic / molal elevation / BP of		
4	and single of (8) (8) and elevation constant		
	Elevation of Bp at conc of solo 1 molal		
3	Tba-Tbo = kp x mt x 1000 mitules sincted and a hang .		
	mwt Mwt		
26W =	Depression of Freezing point (ATf):		
mwta	on addition of Non volatile solute VP of solution decreases		
	so FP of solution decreases called Depression of FP.		
Sold	Tf° > Tf°		
0	$\Delta Tf = Tf^{o} - Tf^{s} - (Tf^{o} = FP \text{ of solvent } / Tf^{s} = FP \text{ of solution })$		
@4	$\Delta Tf = Kfm$ $Kf - cyoscopic / F.P depression constant$		
33	8 ΔTf 0=H Kf X wt x 1000 : Internal •		
	mwt wg.		
•	Osmotic pressure: 5 off (1)		
-	Moving of solvent molecules High conc - Low conc through		
(stube)	semi-permeable membrane alled pampais x = = = = = = = = = = = = = = = = =		
-	1 - source analised on the sister to the sampois		
	called osmotic pressure. (V)		
0	T(= CST (iii) (iic = conc = moloxity = n x 1 = wt x 1000		
	S = R = 0.0821 = 1 7/ VU mwt VL mwt Yml		
	12		
	classmate		

,	DATE DATE
2	Two solutions mixed VITERS = TI + TI2 11 X 00 = 29-04: (2
(2)	$= CIST_1 + C_2ST_2$
	= CIST + (CZST) 94 your movement
	consistent of citce) stoll to midipho no
3	
िंग	
(ta:	OP(A) < OP(B) of A is hypotonic than B of add = dTA O
b	
Inota co	OP (A) > OP (B) - A is hypertonic than B
	on 1 glos la onao to 98 lo mitovala (-)
	A and B are isotonic solution oval x tw x dx = "JT- ot 6
	and the same of the same
	TTA = TTB : (2TD1X Jnive D2 X3dr) to micrwy30 = 002
<u></u>	CISTIC= C2ST2 102 40 7 stulo VILlito lov mV2L mit mut
	So Fr of Solution is a superior of the solution of the solutio
Tfs	COATE VICTORIAN CONTRACTOR OF THE CONTRACTOR OF
(0	Dits CE= G2 17 = 27 / tasvlos to DE= US = 21-07 = 3TA 0
J	moteria misserge / F.P. depression constant
	Formulae: 0001 x to x Kf (H20) = 1.86 3
	gu tum
0	RIVP = i X solute (i) No. of solute particles (i)
2	ΔTb+ = i Kbm - 2000 dpill (ii) Lamount of solute private -
3	ATT = i kfm singmed halle (iii) Not of moles of solute (x solute)
21209	The (iv) concrete solution (v) on -
	called comptic pressures (v)
	ST THE STAND BUILDING TO STAND THE STAND STANDS
ont y the	RLYP/LVP/BP/ATS/ATS/ATS/ATS/ATS & 10(i) (ii) (iii) (iv) (v) TO
V Jun	1 = 1280.0 = 9 = 2
1	2
	classmate PAGE

	DATE		
	Account to a lambar to the lam		
	According to Roults law:		
0	Dilute and the same of the sam		
0	Dilute PO-PS = wt x M·wt PO/LVP		
<u> </u>	concision lamelipo ta motima to possibilità possibilità de la concisiona d		
	PO-PS = wt x M·wt -tm·wtofida		
	Ps mwt Wt solute		
	A and B are isotonic solution \longrightarrow $wt_1 \times 1000 = wt_2 \times 1000$		
No.	mwt, V, mwt ₂ V ₂		
Ana.	Roult's law: RLVP = Xsolute		
	LVP = Xsolute		
	Po		
-	Abnormal Mwt - VantHoff Factor (i)		
44 1			
	i = No. of solute porticles> For Dissociation i>1		
	For Association — i<1		
	For glucose, sucose, For diss/Associ — i=1		
	Fructose, Non volatile		
	solutes, Non electrolytic solutes Association		
Y N			
0	For degree of dissociation $(x) = 1-1$ $2A \longrightarrow A_2$ $i = 1/2$		
	of solute $0-1$ $3A \rightarrow A3$ $i=1/3$		
2	For degree of association (α) = $l-1$ 4A \longrightarrow A4 $i=1/4$		
	of solute		
	, Description of the control of the		
1	n = no of particles asso/disso when x = 100%		
7	$l = 100 \cdot \text{of particles asso/disso when } = 100 \% \text{ or } \neq 100 \%$		
-	Relation b/w normal and abnormal wt:		
V	the second of the second secon		
	classmate		

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	i = No. of particles asso/diss : was stluss at gribrana	-
0	t = No. of pacticles about	
	No of particles taken 1/1/29 tourn x to = 29-29 stulia	M
<u> </u>	i = Normaliwti dhormal wt = Mormal weight 100	0
	Abnormal wt two = 200 (i	
	atules tw Jum eq	-
haal	A and B are isotonic solution wit, x 1000 = witz x	0
	nester out of the nester of white	
72	Roult's laur: IRLVF = Xsoluteur	•
1.1	WP = Xsolution with the second of the second	
1	Po Po	Tay Co
	Accormal Mast - Vanthuff Factor (i)	0
		4
· 1/2	i = No. of solute particles -> For Dissociation -iv>	
	For Association — i<1	- 1
3	For glucese, succese, \leftarrow For diss/Associ \leftarrow i=1	
1 4	Fructose, Non volatile	7 T
no	solutes, Non electrolytic solutes	
	Solmes, Non Electionalic solves	- 1 m
c/1=	For degree of dissociation $(\kappa) = 1-1$ $2A \longrightarrow A2$ i	0
		0
	aming 10	
	For degree of the second of the second of a garpan rot	(3)
	of solute	THE ST
(s	N .	
	$n = no \ c$ posticles asso/disso when $\kappa = 100\%$.	
	$\lambda = 0.00 \text{ of particles assoldisso when } \kappa = 100\% \text{ or } \kappa \neq 100\%.$	
1 - 1	Relation blus normal and abnormal we:	-
	classmate	