IOTW: Blood Gas

Please refer to the following investigation (VBG) for the subsequent questions:

FO_2(I)	21.0 %					
Sample type	Venous					
Operator	40049393					
T	37.0 °C					
Note						
Acid Base Status						
pH	7.175		[	-	]	
pCO_2	29.2	mmHg	[	-	]	
pO_2	37.8	mmHg	[	-	]	
sO_2	60.6	%	[	-	]	
↓ $cHCO_3^-(P)_c$	10.3	mmol/L	[	22.0 - 32.0	]	
↓ $cBase(Ecf)_c$	-16.5	mmol/L	[	-3.0 - 3.0	]	
Electrolyte Values						
cNa^+	149	mmol/L	[	-	]	
cK^+	4.4	mmol/L	[	-	]	
cCl^-	113	mmol/L	[	-	]	
cCa^{2+}	1.31	mmol/L	[	-	]	
Metabolite Values						
↑ *c*Glu	> 40	mmol/L	[	-	]	
*c*Lac	3.7	mmol/L	[	-	]	
↑ *c*Crea	90	µmol/L	[	45 - 90	]	
Oximetry Values						
↑ *c*tHb	159	g/L	[	120 - 150	]	
sO_2	60.6	%	[	-	]	
*F*HHb	36.8	%	[	-	]	
↓ FO_2Hb	59.6	%	[	94.0 - 98.0	]	
*F*MetHb	1.0	%	[	0.4 - 1.2	]	
*F*COHb	0.6	%	[	0.3 - 1.8	]	
ctO_{2c}	13.3	Vol%	[	-	]	
BO_{2c}	21.8	Vol%	[	-	]	
Calculated Values						
$pCO_2(T)$	29.2	mmHg	[	-	]	

1. What is the major acid-base abnormality?
2. What is the Winter's formula? Please apply the Winter's formula to this VBG. What is the clinical implication of this?
3. What is the anion gap? Please provide your differentials based on the anion gap.
4. What is the delta ratio for this VBG? What is the role of a delta ratio?
5. What is the corrected serum K+?
6. What is the corrected serum Na+?
7. Serum Urea is 10mmol/L. What is the estimated serum osmolality?
8. What is your provisional diagnosis?
9. Describe the clinical picture you may expect of this patient with this VBG.
10. Outline your management.