Unit Test 1 (2020-21 Sem-II)

Total points 22/27

Part- 2

✓ The composition of chloride ion electrode is * 1/1

- (●) Ag2S and AgCl ✓
- ( ) AgS and AgCl2
- ( ) AgS and AgCl
- ( ) AgCl and NaCl

✓ Determination of urea by enzyme based electrode the potential is developed due to ..... ion * 1/1

- ( ) OH-
- ( ) F- ion
- ( ) Cl- ion
- (●) NH4+ ✓

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✗ In glass membrane electrode, the glass containing 11% Na2O, 18% Al2O3, 71% SiO2 is highly sensitive to which of the following ions? * 0/1

- ○ Sodium
- ◉ Hydrogen ✗
- ○ Nitrogen
- ○ Silicon

Correct answer

- ◉ Sodium

✓ conductance of 1 Cm 3 of a solution is called * 1/1

- ○ specific resistance
- ◉ specefic conductance ✓
- ○ specific potential
- ○ special conductance

Division *

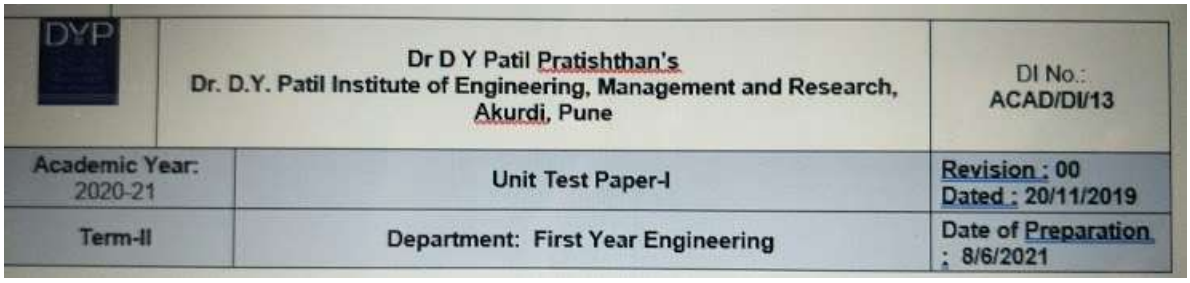
B

✓ Concentration of KCl solution is used determine potential of * 1/1

- (●) calomel ✓
- ( ) SHE
- ( ) Glass electrode
- ( ) none of these

✓ The glass membrane in glass electrode undergoes ion exchange reaction in which * 1/1

- (●) Na+ ions of glass are exchanged for H+ Ions ✓
- ( ) H +ions of glass are exchanged for Na+ ions
- ( ) glass is exchanged for Na+ ions
- ( ) Hg2 2+ ions are exchanged
- ( ) Other: _____



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✗ The properties of gas sensing membrane * 0/1

- ○ Non porous
- ○ Hydrophyllic
- ○ Both a & b
- ◉ Porous and hydrophobic ✗

Correct answer

- ◉ Both a & b

✓ with rise in temperature the conductance of a solution of an electrolyte generally..... * 1/1

- ○ decreases
- ◉ increases ✓
- ○ remains constant
- ○ none of these

✓ the distance between two electron of a cell is 3 cm and are of each electrode is 6 cm2 the cell constant is..... * 1/1

- ○ 2.0
- ○ 1.0
- ◉ .5 ✓
- ○ 18
- ○ Other:

✓ At the bottom of the calomel electrode, liquid ....., is placed. * 1/1

- ○ NaCl
- ◉ Hg ✓
- ○ KOH
- ○ CaCl2

✗ Internal reference solution used in fluoride ion electrode is * 0/1

- ○ NaF + NaCl
- ○ KF + KCl
- ◉ Both a and b ✗
- ○ NaCl + KCl

Correct answer

- ◉ NaF + NaCl

✓ NH4OH + NH4Cl is an example of * 1/1

- ○ dilute buffer
- ○ acidic buffer
- ○ concentrated buffer
- ◉ basic buffer ✓

Name *

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✓ Calomel shows E = 0.2422 V for * 1/1

- 0.1 M KCl
- 1 M KCl
- saturated KCl ✓
- none of these

✓ The solution which resists change in pH though small amount of acid or base is added is called ..... * 1/1

- Indicator
- buffer ✓
- titrant
- none of these

✓ Conductivity of a solution is directly proportional to * 1/1

- Distance between two electrode
- molecular weight of electrode
- Number of ions per cc of solution. ✓
- cross sectional area of electrode

✓ Enzyme based electrode is used for the determination of * 1/1

- ○ F- ion
- ◉ Urea ✓
- ○ Ammonia
- ○ Cl- ion

✗ The enzyme is mobilized at the surface of enzyme based electrode. * 0/1

- ◉ True ✗
- ○ False

Correct answer

- ◉ False

✓ Glass electrode used an indicator electrode in * 1/1

- ○ Potentiometer
- ○ Conductometer
- ◉ pH meter ✓
- ○ None of the above

✓ Calomel is made by using * 1/1

- (●) Hg with mercurous chloride ✓
- ( ) Hg with mercuric chloride
- ( ) Zinc with mercurous chloride
- ( ) Ca with mercurous chloride

✓ Potential of glass electrode is given by * 1/1

- ( ) EG= EG0 - 0.00591 Ph
- (●) EG= EG0 + 0.00591 Ph ✓
- ( ) EG= 0.00591 pH -E0G
- ( ) all of these

✓ In solid state membrane electrode the membrane is made of ..... * 1/1

- ( ) Organic compound
- ( ) Covalent compound
- (●) Ionic compound ✓
- ( ) Water soluble compound

✓ The units of equivalent conductance are..... * 1/1

- ohm cm equivalent
- ohm-1 cm-1 equivalent-1
- ohm-1 cm2 equivalent-1 ✓
- ohm-1 cm-2 equivalent-2

✓ In S.A.-S.B. titration , at neutralisation point , conductance attains * 1/1

- maximum value
- minimum value ✓
- zero
- seven

✗ In strong acid -strong base titration, initially conductance decreases because * 0/1

- Na+ ions are less mobile
- Na+ ions are highly mobile ✗
- H2O formed decreases the conductance
- none of these

Correct answer

- Na+ ions are less mobile

✓ The sensor used for H+ ion concentration is * 1/1

- ○ Gas sensor
- ◉ glass membrane ✓
- ○ protein membrane
- ○ none of the above

✓ ....., electrode is represented by Hg/Hg2Cl2(s)/ Cl- * 1/1

- ○ quinhydrone
- ○ hydrogen
- ○ glass
- ◉ calomel ✓

✓ Generally ....., method is used to measure conductance. * 1/1

- ○ Bragg
- ○ Beer Lambert
- ◉ Wheatstone Bridge ✓
- ○ All of above