Subject Code : 34 (NS)
CHEMISTRY

YEAR - 2017-18

SCHEME OF VALUATION

SUBJECT CHEMISTRY	SUBJECT CODE : 34	VERSION

QN. No.	PART-A	MARKS
1	0.932	1
2	Correct Statement	1
3	The no. of ions per unit volume that carry the current in a solution decreases	1
4	2+1 = 3 or 3 or Three	1
5	The impurities are more soluble in melt than in solid state of metal	1
6	Radon or Rn	1
7	Six or 6	1
8	sp^2	1
9	Penten-2-one	1
10	Thymine	1
	PART-B	
11	$\frac{1}{8}$th x 8 corner particles + $\frac{1}{2}$ x 6 face centred particles	1
	$\frac{1}{8} \times 8 + \frac{1}{2} \times 6$	
	$1 + 3 = 4$	1

P.T.O.

Qn. No.		Marks Allotted
12	Labelled diagram	1
	overall cell reaction	1
13	$t_{1/2} = \frac{0.693}{K}$	1
	$= \frac{0.693}{1.15 \times 10^{-3}} = 602.6\ S$	1
14	a) Definition	1
	b) +3	1
15	2,4,6-trinitrophenol or picric acid	
	is formed	1
	Equation	1
16	Explaination	1
	Equation	1
17	Analgesics are neurologically active drugs which abolish pain without disturbing nervous system	1
	Aspirin, paracetamol (anyone)	1
18	Explanation	1
	Equation	1

Qn. No.	PART - C	Marks Allotted
19	Labelled diagram	1
	Cathode reaction	1
	Anode reaction	1
20	Three balanced equations	(1+1+1)
21	i) SO_2Cl_2	1
	ii) $3SO_2 + 2H_2O$	1
	iii) $NO_2 + O_2$	1
22 a)	Any two suitable properties	1+1
b)	$H_2S + Cl_2 \longrightarrow 2HCl + S$	1
23 a)	Two suitable reasons	1+1
b)	$Cu^{2+}(aq)$	1
24	Three balanced equations	1+1+1
25	Ele. configuration of Co^{3+} & formation of sp^3d^2 hybridisation	1
	octahedral geometry	1
	Paramagnetic due to presence of unpaired electrons	1

Qn. No.		Marks Allotted
26 a)	Ligand which can ligate through 2 different atoms	1
	Linkage isomerism	1
b)	Potassium tetrahydroxidozincate(II)	1
	PART-D	
27 a)	Diagram of BCC unit cell	1
	Calculation of $r = \frac{\sqrt{3}}{4}a$	1
	Formula	1
	Substitution & answer	1
b)	The defect caused by the missing of equal no. of cations and anions from ionic solid	1
28 a)	Formula	1
	Substitution	1
	Simplification & Correct value	1
b)	Any two differences	1+1
29 a)	Formula	1
	Substitution	1
	Correct value with unit	1
b)	Statement	1
	2F	1

Qn. No.		Marks Allotted
30 a)	Rate expression $\frac{dR}{dt} \propto [R]^0$	1
	Integration & find I value	1
	up to final form	1
b)	Graph showing Ea & Ea' with correct X & Y axis	2
31 a)	Any two characteristics	1+1
b)	Statement	1
	Reason	1
c)	A reaction in which catalyst & reactants are in same phase	1
32 a)	Step I rean eqn	1
	Step II rean eqn	1
b)	Explaination	1
	Equation	1
c)	Finkelstein Reaction	1
33 a)	3 steps equations	1+1+1
b)	Explaination	1
	Equation	1
34 a) i)	$CH_3CH_2CH_3$	1
ii)		1
iii)	CH_4	1

Qn. No.		Marks Allotted
b)	Explanation	1
	Equation	1
35 a)	Explanation	1
	Equation	1
b)	Aniline treated with $NaNO_2 + HCl$ at 273 - 278 K benzene diazonium chloride is formed	1
	Equation	1
c)	Ammonia	1
36 a)	correct structure	2
b)	The amino acids which can be synthesized in the body	1
	Glycine	1
c)	Vit C	1
37 a)	Explaination + Equation	1+1
b)	$+CH_2-CH_2+_n$	1
	$+CH_2-\underset{Cl}{C}=CH-CH_2+_n$	1
c)	Isoprene or 2-methyl-1,3-butadiene	1