

Subject Code : 34 (NS)
CHEMISTRY

YEAR - 2017-18

SCHEME OF VALUATION

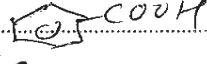
SUBJECT CHEMISTRY	SUBJECT CODE : 34	VERSION
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QN. No.		MARKS
<u>PART-A</u>		
1	0.932	1
2	Correct Statement	1
3	The no. of ions per unit volume that carry the current in a solution decreases	1
4	$2+1=3$ or 3 or Three	1
5	The impurities are more soluble in melt than in solid state of metal	1
6	Radon or Rn	1
7	Six or 6	1
8	SP ²	1
9	Pentan-2-one	1
10	Thymine	1
<u>PART-B</u>		
11	$\frac{1}{8} \times 8$ corner particles + $\frac{1}{2} \times 6$ face centered particles	1
	$\frac{1}{8} \times 8 + \frac{1}{2} \times 6$	
	1 + 3 = 4	1

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

Qn. No.	<u>PART-C</u>	Marks Allotted
19	Labelled diagram Cathode reaction Anode reaction	1 1 1
20	Three balanced equations	(1+1)
21	i) SO_2Cl_2 ii) $3SO_2 + 2H_2O$ iii) $NO_2 + O_2$	1 1 1
22a)	Any two suitable properties	2+1
b)	$H_2S + Cl_2 \rightarrow 2HCl + S$	1
23a)	Two suitable reasons	2+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 Octahedral geometry Paramagnetic due to presence of unpaired electrons	1 1 1

Qn. No.		Marks Allotted
26a)	Ligand which can ligate through 2 different atoms	1
	Linkage isomerism	1
b)	Potassium tetrahydroxidozincate(II)	1
	<u>PART-D</u>	
27a)	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
28a)	Formula	1
	Substitution	1
	Simplification & correct value	1
b)	Any two differences	4/7
29a)	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 E_a & E_a' 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 react eq 2	1
	Step II react eq 2	1
b)	Explanation	1
	Equation	1
c)	Finkelstein Reaction	1
33 a)	3 steps equations	1+1+1
b)	Explanation	1
	Equation	1
34 a)	CH_3, CH_2, CH_3	1
i)		1
ii)	CH_4	1

Qn. No.		Marks Allotted
	b) Explanation Equation	1 1
35a)	Explanation Equation	1 1
	b) Aniline treated with $\text{NaNO}_2 + \text{HCl}$ at 273-278 K benzene diazonium chloride is formed Equation	1 1
	c) Ammonia	1
36a)	correct structure	2
	b) The amino acids which can be synthesised in the body glycine	1 1
	c) Vit C	1
37a)	Explanation + Equation	(1)
	b) $\text{-(CH}_2\text{-CH}_2\text{)}_n$	1
	$\text{-(CH}_2\text{-C(=CH)-CH}_2\text{)}_n$ Cl	1
	c) Isoprene or 2-methyl-1,3-butadiene	1