

ANSWER KEY

✓ $\frac{1}{6}$

FIRST.. YEAR HIGHER SECONDARY EXAMINATION ..SEPT. 2021

PART-I/II/III

SUBJECT: ...CHEMISTRY... #1.....

CODE NO: F.Y...264

VERSION: ~~1~~

G.O. SCORES

...2... HOURS

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
1.		Statement / equation	2	2
2	i) CH		2	2
	ii) C H ₂ Cl		2	
3		Definition	2	2
4		Groups - Definition	1	2
		period - definition	1	
5		Sigma (σ)	1	2
		Pi (π)	1	
6		$\sigma 1s^2$	2	2
7		Statement / formula	2	2
8		Definition	2	2
9	a)	$K_c = \frac{[C]^c [D]^d}{[A]^a [B]^b}$	2	2
	b	7	1	
10		Statement.	2	2

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
11		i and iv or Any one	2 } 2 }	2
12		Definition.	2	2
13	a) Law of multiple proportion b) Statement		1 } 3 }	3
14:		$C_6H_{12}O_6$ $(6 \times 12) + (12 \times 1) + (6 \times 16)$ $= 72 + 12 + 96$ $= 180$	2 } 1 } 1 }	3
15		Any two postulates	3	3
16	a) Definition / equation b) De-Broglie		3 } 1 }	3
17	a) Boyle's law b) Definition		1 } 3 }	3
18	a) $PV = nRT$ b: 6.022×10^{23}		3 } 1 }	3
19	a) Enthalpy b) Statement.		1 } 2 }	3
20	a) Statement b: Statement		2 } 3 }	3

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
21	a) Diborane / B_2H_6 b) Structure		1 } 3 }	3
22	a) Any two allotropes b) water gas		3 } 1 }	3
23	i) $(+1) + x + (2 \times 4) = 0$ $x = 8 - 1 = +7$ Oxidation number of Mn = +7 ii) $(2 \times 1) + x + (2 \times 4) = 0$ $x = 8 - 2 = +6$ Oxidation number of S = +6 iii) $(+1) + x + (4 \times 1) = 0$ $x = -5$ Oxidation number of B = -5		1 } 1 } 1 } 1 } 1 } 1 } 1 }	3
24	a) Name of any two redox reaction b) Combination reaction		2 } 1 }	3
25	a) One method b) Two uses		1 } 3 }	3
26	a) CO and H_2 b) Reason		2 } 3 }	3

Qn No	Sub Qn	Answer key / value points	Score	Total Score
27	a	i) Na_2CO_3 ii) plaster of paris	1 1 2	3
	b:	method for preparation		
28	a)	milk of lime	1	3
	b)	CaSO_4	1	
	c)	Preparation of NaOH	2	
29		Mendeleev's periodic law definition	2	4
		Modern periodic law definition	2	
30	i)	Definition	2	4
	ii)	Definition	2	
31	a	sp^3	1	4
	b)	hybridisation - sp^3	1	
		Shape - V / bent	1	
		bond angle - 104.5°	1	
		Any correct two answer for b	4	
32		m.o configuration	3	4
		$\text{B.O} = \frac{\text{Nb} - \text{Na}}{2}$	2	
		$= \frac{10 - 6}{2} = 2$	2	
		Paramagnetic	1	

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An No.	Sub An.	Answer key / Value point.	Score	Total score.
33		i) Statement ii) Statement	2 } 2 }	4
34	a)	Name of any two Quantum numbers	4 }	4
	b)	Explanation	2 }	
35	a)	Statement	2 }	4
	b:	Lewis acid - BF_3 , AlCl_3	2 }	
		Lewis base - H_2O , NH_3	2 }	
36	i)	2-methyl pentane	1 }	4
	ii)	cyclohexane	1 }	
	iii)	pentan-2-ol	1 }	
	iv)	2,3-dimethyl hexane	1 }	
37	a) i)	2p	1 }	4
	ii)	3d	1 }	
	b:	Statement	2 }	
38	a)	Two chain isomers	2 }	4
	b) i)	position isomerism	2 }	
	ii)	functional isomerism	2 }	
39	a) i)	$\text{CH}_3\text{-CH}_3$	1 }	4
	ii)	CH_4	1 }	
	b)	Explanation / Reaction equation	3 }	

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Qn no:	Sub an	Answer key / value point	Score	Total Score
40	a)	iii	1	4
	b)	Staggered.	1	
		Reason	2	