Aromaticity, Anti-aromaticity,

Assignment - 1a.

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s.No	Type/Nature	Compound	Reason (S)
0	41 1 1 1 1		
			a. A cyclic compound.
1.	Anti-aromatic		6. Sp2 phybridised. Planar compound.
			c. By box huckel's rule,
		1,3,5,7 - cycloocta-	i) 4n+2 = 8 (:8 h e we there)
		-tetraene	3 4n = 8-2=6
			ə) 4n = 6
			=) n = 6/4 = 3/2 = 1.5
			no not integral, compound not aromatic
			ii) 4n = 8 (: 81 e are there) -1 n = 8/4 = 2
			introval manualism : Compound is
			anti-aromatic (Am)
			www.www.c.
2	Non - Arment		a. A cuelic compound.
7.	Non-aromati	-	a. A cyclic compound. b. One C centre is Sp3 hybridized. Thus overall molecule is non-planae.
			overall molecule is non-planax.
		13 - cuclippenta	
40	1	1,3-cyclopenta diene	C. Huckel's rule not applicable.
1			
			so compound is non aromatic (Ams)
500		* 110	

- 1		0 1	Dacioman
SN	Nature	Compound	Reasons
3.	Non-aromatic	13-cuclohera-	a. A cyclic compound. b. 2-C centres are Sp³ hybridized. so overall compound is non-planar. e. c. Huckel's rule not applicable.
			So compound is non-aromatic (Ams)
4.	Non-aromato		a. A cyclic compound. b. 1 & centre is sp3 hybridized
		1,3,6-cyclohepta- triene	c. Huckel's rule not applicable.
			So compound is non aromatic (Ans)
		No. of the state o	
5.	Anti-aromatic		a. A cyclic compound. b. spr hybridized. Planar compound.
		cyclobutadiene	c. By Muchel's rule: i; 4n+2 = 4 (2 \(\tau \) tomels) 3 4n = 4-2 = 2 3 n = 2/4 = 0.5 in is fraction, so compound is not aromatic

N Nature	Compound	Rogsons
IV Julia	Congrouna	iii (110 = /1 (20 (vondo)
		ii_{2} $4n = 4$ (2 n bonds) 4n = 4/4 = 1
		: est n is integral number, so
		compound is anti-aromatic is nature.
***************************************		Compound 9 com and a rest
6 Non- an mate		a Nort a realise assument
6. Non-aromatic		a. Not a cyclic compound. b. Sp2 hybridized. Planar molecule.
	11	c. Huckel's rule not applicable.
	12 - lough	: it is not a cyclic compound, it is
	1, 5, 5 - nexal ruene	of asserting instrume
	*	not aromatie à nature.
7. Non-aromatic	//	a. Not a cyclic compound.
4. Jun - womanc		6. sp hybridized. Planar molecule.
		c. Huckel's rule not applicable
	1,3 - butadiene.	
	1,3 suraciene.	not aromatic in nature.
		The working of That's a
8 No and t		a Not a cucli exampsund
8. Non-aromatic		1. 842 huserid: 70d . Planas motocule.
		a. Not a cyclic compound. b. sp² hybrid; zed. Planar molecule. c. Huckel's rule not applicable.
	a la Lovadiana	it is tak a respire comparend it
	2,4-nexamere.	is non aromatic is nature
		6 Hor warrage
	1	A andi employed
9. Aromatic	1 0 4	6. Spr hybridized. Planar molecule.
	11	10. Sp nyvacial. Plant moretine.
		c. By Huckel's rule: 4n+2 = 10 [5x6
	[10]-annulene	=> 4n=10-2=8 + 4n=8 + n=2
	*	in is integral number, in the compoun
		& aromatic in nature.
ME CONTRACTOR		

5.14	Nature	Compound	Reasons
			a. A cyclic compound.
10.	Aromatic.		6. Sp hybridized. Planar molecule
			C. By Huckel's rule;
			4n+2 = 14 [: 71 bonds]
		[14]-annulene	4 4n = 14 - 2 = 12
		[14] - Minutent	n = 12/4 = 3
			: n is integral number : the compound
			is asomatic is nature (Ans)
11.	Arramatic		a. A cyclic compound.
	The control of the co		b. Sp hybridized. Planar molecule
		N.	c. By Auchel's rule;
		4	04n+2=6 [:3 \(\bar{1}\) bonds]
- 19		Pyridine.	1 4n = 4 =
			d = 4/4 = 1
		N	: n'is integral. Do the compound
			is aromatic in nature. (Ans)
A.			
12.	Aromatic		a. A cyclic compound. b. Sp² hylorid: Zed. Planar molecule. c. By fluckel's trule, 4n+2=6 (::37 bands]
			1. Sp2 hyloridized. Planas molocula.
		+/	C. By Huckel's fuele
		· ·	9 4n+2=6 (:3x bands 7
		pyranosium catou	9 49 = 4
			n n: 4/4=1
			is aromatic in nature. (Ans)
			is aromatic in nature. (Ans)
	111	0 0 0 0	

SM	Nature	Compound	Reasons.
13-	Anti-aromatic		a. It is a cyclic compound.
			6. sp hybrid zed. Planar molecule.
		.0.	c. vBy Huckel's rule. 4n+2 = 4 [: 27 bonds]
3			
			$\Rightarrow 4n = 2$
			1 N = 2/4 = 0.5
		25-60-00-00-00-00-00-00-00-00-00-00-00-00-	: n is not an integral number, so
			compound is non-aromatic.
	1000		
			iy 4n = 4 [: 2 1 bonds]
			1 N = 4/4 = 1
			in is integral: the compound is
			anti-aromatic in nature (Am)
	August		a. A cyclic compound.
14.	Aromatic	J:	16. Sp hubridized Planar molecule.
		N:	c. is By Huckel's rule.
		й	6. sp hybridized. Planar molacule. c. i, By Wuckel's rule; 4n+2=6 [::37 bonds]
			7 4n = 6-2=4
			$\Rightarrow n = 4/4 = 1$
			: n is integral & : the compound
			is aromatic in nature. (Ans)
15.	Non-aromatic		a. Not a cyclic compound 1. 2 sp3 hybridized C centres. Not a planar molecule.
1			1. 2 sp hyloridized & centres
			Not a planar molecule.
-			c. Huckel's rule not applicable.
-			The compound is non aromate in
1			nature (Ans)
1			rume (Mas)
1			
1			
-		ESCALA ESCALA	

5.11	Nature	Compound	Reasons
	Anti-aromatic		a. A cyclic compound. b. Sp hybridited. Planar molecule. c.ip By Huckel's rule; 4n+2=8 [:4 \(\bar{n}\) bonds] => 4n = 6 => n:6/4 = 3/2=1.5 : n is not an integral number, so the compound is not aromatic. ii) 4n = 8 [:4\(\bar{n}\) bonds] => n = 8/4 = 2 : n is integral, so the compound is Anti-aromatic is nature (Ans)
17	Anti-aromatic		a. A cyclic compound. b. Sp hy bridized. Planar molecule c.i/By Huckel's rule, 4n + 2 = 4 (:2 \(\tau\) bonds) 7 4n = 2 1 n = 2/4 = 0.5 : n is not integral, : the compound is not anomatic.
			iis 4n = 4 (: 25 bonds) in is integral, o: the compound is anti-aromatic in nature

	101	2	
SIM	Nature	Compound	Reasons.
	1		to the second se
18.	Anti-aromatic		a. A cyclic compound.
			6. Sp2 hybridized. Planar molecule.
		cyclopropene	e- ir By Huckel's rede:
,		anion .	4n+2 = 4 (1x + 1 lone paid
			+ 4n = 2
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	=) n = 2/4 = 0.5
			n'is fraction, the molecule is non-
2			aromatic.
			iiz 4n = 4 (1x +1lp)
	, , , , , , , , , , , , , , , , , , , ,		3 n = 4/4 = 1
			antiaromatic in nature
			artearomatic in nature.
	11-1		
19.	Anti-aromatic		a. A cyclic compound.
			1. sp'hybridized. Planar molocule.
			e.il By Huckel's rule;
		NIN	$4n+2=4 [:2\pi bonds]$
			7 4n = 4-2 = 2
1			n = 2/4 = 0.5
1	4		compound is not an integral number, so
			compound is not anomaliz
			ii) 47 [: 27 bands]
			d n = 4/4 = 1
			is anti-aromati in nature
			's anti-aromati in neture.
	N 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
0			

SN	Nature	Compound	Reasons
			a. A cyclic compound
20.	Aromatic.		1. Cht Bulleridi 20 d. Planar molocul.
-			c. By Huckel's rule;
-			4n+2=18 [:97 bonds]
			=> 4n = 16
			1 n = 16/4 = 4
			: n is an integral number,
			so the given compound is aromati
		[18]-armilene	in nature.
	•		
21.	Anti-aromatic	й й-н	a. A cyclic compound.
		N-H	6. Sp2 hybridized - Planar molecule.
			c. ix By Huckel's rule: 4n+2 = 6 [: 2 \(\) bonds 7
		Histidin	4n+2= 6 1: 2 n bonds 7
			= 4n = \$4 +14p.
			2 n = 2/4 = 0-51
			Lin is a fraction, the compound
			is non faromatic
			iic 4n = 4/[: 27 bonds]
			n = 4/4 = 1
			is arti-anomatic in nature
			o ante-ariomatic in nature
22	Aromatic	// 1	A Render of
XX.	THOMAN	()	a. A eyou'c compound.
		Ö	a. A cyclic compound. b) Sp2 hyleridized. Planar molecule. c. By Huckel 's rule; 4n+2=6 (2n+14p)
		furan	410 + 2 = 6 (2= 11h)
		J 60 100 D	1 40 = 4
			n = 1
			: n is interest in the complound
			is aromatic in nature.
			V · New C

SIN	Nature	Compound	Reasons.
00	Aumat.		1 0 of Original
23.	Aromatic		a: A Cyclic Compound.
			6. 8pt hybridised. Planar molecule.
			c. By 'truckel's rule; 4n+2= 4+2 (2\vec{n}+24)
		cyclopent -1,3-	= 6
		diene anion.	± 4n = 6-2=4
			a n = 4/4 = 1
9			: n is integral, so the compound
			is aromate in nature.
24	Anti abomatic		a. A cyclic compound.
41.	ripa wantaro		6. sp-hybridited. Planar molecule
		*	Cij By Huckel's rule;
		cyclopent-1,3-	4n+2 = 4 (2n bonds)
		cyclopent-1,3- diene cation.	$\partial 4n = 2$
			4 n = 2/4 = 0.5-
			n is fracton, so compound is
18.	N. 18 . 1 . 1 . 1		non asomatic ((((()
10		1	ii) $4n = 4$ (27 bonds) 1 = 4/4 = 1
			in is integral, so compound is
			arti-aromatic.
25	Non-aromata		as. A cyclic compound. b. Sphyleridized Planar molecule.
100			6. Spt hyleridized. Planar molecule.
			e. o Hurkel o rue:
			4n+2= 4+1 (2n+14nee)
-		cydopent-1,3- diene radical.	$\exists n = 3/4$
-	100	diene radical.	30 n is fraction, compound non aromate.
-			ii $4n = 4+1$ $(2\pi + 1 lone e)$ + n = 5/4
			: n is fraction, compound not anti-
-			aromatic .
			so the compound is non-aromatic (An)

26. Non aromatic	+	a. A cyclic compound. b. Sph hybridized. Planar molecule. c. By Huckel's hule: 4n+2 = 4+1 (25 bonds +1 3 4n = 3. 'Lone e') 1 n = 3/4 : n is fraction, : compound is not aromatic ii 4n = 4+1 (21 bonds +16 i) n = 5/4 e') : n is fraction, : compound is not anti aromatic. ii 4n = 4+1 (21 bonds +16 ii n = 5/4 e') : n is fraction, : compound is not anti aromatic. ii Yhe compound is non aromatic in nature. (Ams)
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