SANGAM S.K.M COLLEGE-NADI

YEAR 13 CHEMISTRY STAY HOME WORKSHEET -2021

		WEEK 2		
GENERAL CHEMISTRY	Safety in Laboratory:	Experimental techniques:	INVESTIGATING MATTER	Atomic structure and
Scientific Skills:			Atomic Structure and	bonding:
	4. What is the purpose of	8. Differentiate between	Bonding:	
1. The	eyewash fountain in a	reflux and distillation.	11. Two common isotopes	14. Which principle is to
variable goes on the x-	laboratory?		of naturally occurring	be followed when writing
axis and the			Neon are ²⁰ Ne and ²² Ne. Calculate the	the quantum numbers?
variable			percentage	
goes on the y- axis.		Green Chemistry:	abundance of each	
	5. Write the name of the	9. Explain what green	isotope if the relative	
2. Interpret the graph	hazard symbol given	chemistry is.	atomic mass of	15.
given below.	below and state		naturally occurring Neon is 20.18.	a. write the electron
	examples where this symbol can be found.		Assume 20.18= 100%	configuration for sodium ion.
	Symbol can be found.	10.		1011.
		The reaction		b. show the orbital
		equation for		diagram
		extracting iron		
		from its ore using		
		carbon is:		
		2Fe ₂ O ₃ + 3C → 4Fe + 3CO ₂ Calculate the atom		16.
	e.g:	economy of this	12. Fill the table below Quantum symbol # of	a. write the electron
		reaction.	number orbitals	configuration for
			Principle	Chloride.
3. Draw the line of best	6. Explain how acids can		Secondary	
fit.	be disposed in a		Magnetic	b. show the orbital
	laboratory.			diagram
			spin]
				17 rule

7. State one information	13. Write the electron	states that electrons are
that can be found on the	configuration of oxygen	filled singularly first
SDS.	and determine the 4	before any pairing can
	quantum numbers of the	occur.
	8t ^h electron.	

	WEEK 3			
Atomic structure and	Trends in periodic table:	Chemical Bonding:	Polarity of Molecules:	<u>Intermolecular</u>
bonding:	21. Explain why O ²⁻ ion	24. Differentiate	27. Explain why :	attraction: 29. Name the type of
18. a. Use the electron configuration for	has a larger radius than oxygen atom.	between ionic and covalent bond.	O_2 is a non-polar molecule but NH_3 is a polar molecule.	intermolecular attraction present in the following substances.
Chromium and draw the orbital diagram. 1s ² 2s ² 2p ⁶ 3s ² 3p ⁶ 3d ⁵ 4s ¹	22. Provide explanations	25. Draw the Lewis structure of and		a. Two iodine molecules b. A solution of CaCl ₂ and water
19. Write the abbreviated electron configuration for Manganese.	for the following: The 1 st ionisation energy of boron is lower than the 1 st ionisation energy of beryllium.	determine the shape of the molecule: a. NO ₃	28. Show the formation of dative bonds in the following compounds: a. NH ₃ and BF ₃	30. Explain: The boiling point of straight chain alkanes increases with increase in the number of carbon atoms.
		b. CO ₃₂₋		31. Arrange the following compounds from the weakest to the strongest intermolecular attraction.
Trends in periodic table: 20. Describe the trends in atomic radii across the	23.a. Explain the trends in electronegativity across the period and down the	26. How many pi and sigma bonds are there in ethyne.	b. H₂O and H⁺	HBr, Br ₂ , HI, HF

period and d	own the group in a periodic	period and down the		
group in a Pe	eriodic table.	group in a Periodic		
Table.		Table.		
	b. Arrange the element			
	in the order of			
	increasing			
	electronegativity:			
	Mg, Si, F, K, N			