Which type of bonding accounts for the unusually high boiling point of water? (1) ionic bonding hydrogen bonding covalent bonding (4) network bonding Oxygen, nitrogen and fluorine bond with hydrogen to form molecules. These molecules are attracted to each other by (1) ionic bonds (3) electrovalent bonds /Which change results in a release of energy?
(1) the meling of H, O(s)
(3) the evaporation of H, (4) the condensation of H, (5) (2) hydrogen bonds (4) coordinate covalent bonds The attractions that allow molecules of krypton to exist in the solid phase are due to ionic bonds (3) molecule-ion forces (2) covalent bonds endatequiel Edisseroni van der Waals forces Portions of the graph represent a heat is absorbed and potential The van der Waals forces of attraction between molecules always become stronger as molecular size (I) increases, and the distance between the molecules increases (2) increases, and the distance between the molecules decreases decreases, and the distance between the molecules increases A and C(4) decreases, and the distance between the molecules decreases ting when the substance In which chemical system are molecule-ion attractions present? (1) KCl(g) (2) KCl(!) (3) KCl(s) (4) KCl(aq) **2**€ increases, 11.) Which compound contains both ionic and covalent bonds? (1) HCl(g) (2) NaCl(s) (3) NH₄Cl(s) (4) CCl₄(l) (13.) A solid substance is soft, has a low melting point, and is a poor conductor of electricity. The substance is most likely (1) an ionic solid (2) a network solid (3) a metallic solid (4) a molecular solid 14. The atoms in a molecule of hydrogen chloride are held together by (1) ionic bonds (2) polar covalent bonds (3) van der Waals forces (4) dipole-dipole attraction 15. The carbon atoms in a diamond are held together by (1) metallic. bonds (2) hydrogen bonds (3) ionic bonds (4) covalent bonds 16. A certain substance is a poor conductor of heat and electricity and has a high melting point. The substance is most likely (1) Hg (2) He (3) CO₂ (4) SiO₂ 17. Which compound is a network solid? (1) CH₄ (2) CO₂ (3) CaH₂ ع(4) SiO₂ (4) (18.) Which type of bond would be formed when a hydrogen ion (\mathbf{H}^+) reacts with an ammonia molecule (NH₃)? (1) a coordinate covalent bond (2) a nonpolar covalent bond (3) a metallic bond (4) an ionic bond Which type of bonding involves positive ions immersed in a sea of mobile electrons? (1) ionic (2) nonpolar covalent (3) polar phase change results in a release of energy? $r_o(\ell) \rightarrow Br_2(s)$ $H_0O(s) \rightarrow I$ (4) $NH_3(t) \rightarrow I$ covalent (4) metallic endersqual hear of fusion of a substance is the energy measured during a (ii) phase change chemical change a substance, starting with the s a gas above its boiling point.
Which interval is the substance change of (4) pressure change temperature change defined to fusion is defined as the energy required at constant temperature to hanged unit mass of a gas to a liquid ঝ (3) solid to a gas The graph at right represents cooling of a substance, starni best represents (4) solid to a liquid gas to a solid solid? Which is the formula of a nonpolar molecule containing nonpolar ದ bonds? (1) CO₂ (2) H₂ (3) NH₃ (4) H₂O 38 ₹ The forces of attraction which exist between hydrogen molecules in gas 1 liquid hydrogen are due to (1) ionic bonds (2) hydrogen bonds substance as a graph (3) molecule-ion forces (4) van der Waals forces (5) As the distance between two iodine molecules increases, the attraction of the van der Waals forces between them (1) decreases (2) increases (3) remains the same 6. In which noble gas are van der Waals forces the greatest? (1) Ne **⊗** (2) Xe (3) Kr (4) Ar 8.) Hydrogen bonds are strongest between molecules of (1) HF (2) HCl Which substance will conduct electricity in both the solid and liqui phases? (1) AgCl (2) Ag (3) H₂ (4) HCl (3) HBr (4) HI

30. Which of the following elements has the lowest normal balling

Which atom will form the most polar bond with hydrogen? (1) F (2) Cl (3) Rr (4) I

(37)	Hydrogen bonds are form	ed between mole	ecules when hyd	drogen is covale	ndy	Miles of the last	- III		
	bonded to an element that (1) small atomic radius an (2) large atomic radius an (3) small atomic radius an (4) large atomic radius an	nas a d low electronega d low electronega d high electrones	itivity itivity zativity		€ 		÷ ž	ecule is	
4.	Hydrogen bonding is stron (1) H ₂ S (2) H ₂ O	. (5) 1125	(-/		Ta .		•	arge	· (s)
5.	Compared to the boiling po Which type of bonding cat (1) covalent (2) hyd	rogen (3) ioni	c (4) no	etwork	8	nolecule? H-H-O	(4) KCl(aq)	of the wal ositive ch ive charge ve charge ive charge	$C_6H_{12}O_6(\mathfrak{s})$
6.) Which of the following liqu between its molecules? (1) Xe(l) (2) Kr(l				tion	a water 1 (4)	(4)	partial p partial p tial negal ial positi	ਜ਼ਾਂ? 5(2q) (4)
7)	Given the phase change: Which kind of force acts b (1) hydrogen bond (2) ionic bond	(3) 1110.	H ₂ (l), ules of H ₂ durin lecule-ion der Waals	g this phase cha	nge?	ructure of) KCI(!)	the oxygen's oxygen's par gen's part gen's part gen's part	actions exis
	Which sequence of Groustrength of the van der W (1) Ar(l), Kr(l), Ne(l), Xe (2) Kr(l), Xe(l), Ar(l), Ne	$e(\ell)$ (3) Ne	emonstrates a graph (ℓ) , $Ar(\ell)$, $Kr(\ell)$, (ℓ) , $Kr(\ell)$, $Ar(\ell)$,	Xe(l)	n the	ents the str	e found in (5)	n aqueous solution of an ionic salt, the oxygen atom of the water macted to the negative ion of the salt, due to the oxygen's partial positive charge negative ion of the salt, due to oxygen's partial negative charge positive ion of the salt, due to oxygen's partial positive charge positive ion of the salt, due to oxygen's partial negative charge positive ion of the salt, due to oxygen's partial negative charge	molecule-ion attractions exist?) NaCl(s) (3) C ₆ H ₁₂ O ₆ (aq)
	The kind of attractions the are:	hat result in the d			water	est repres	tions ar 2) Kr(g	tion of a state salt the salt the salt the salt the salt.	molecu 2) NaC
	(1) ion-ion (2) molecule-ion	(4) mc	olecule-atom	of the adjacent	water	am bes	attrac (9	he ion of ion of ion of ion of	l system do m l(aq) (2)
(10 Special consecution and construction of the construction of th	When calcium chloride is molecules will a calcium i (1) the oxygen end, whi (2) the oxygen end, whi (3) the hydrogen end, w (4) the hydrogen end, w	on be attracted; ch is the negative ch is the positive p which is the negati which is the positiv	pole pole ve pole re pole	. *	# *	Which diagram best represents the structure of a water molecule? (1) A_H (2) H_O (3) 0-H-O (4) H-H-O		THE COSE	(I)
Ó	l. Which type of attraction	is directly involved	d when KCl diss	olves in water?		(E)	(4)	(<u>10</u>)	(9)
	(1) molecule-molecule (2) molecule-atom	(3) mo (4) ion	olecule-ion n-ion		ia .				
Sentitive Sentitive	(1) molecule-molecule (2) molecule-atom (2) The transfer of electrin the formation of (1) hands (2) reproduct	(4) ion ons from sodium a (1) coordinate cove bonds (4) ionic b	n-ion atoms to chlorine alent bonds (2) p	atoms results	3	a O			
publica immini a	(1) molecule-molecule (2) molecule-atom (2) The transfer of electrin the formation of bonds (3) nonpolar (3) What is a characteris (2) They have high years (4) They are	(4) ion cons from sodium a (1) coordinate cove bonds (4) ionic b tic of ionic solids? apor pressures.	n-ion atoms to chlorine alent bonds (2) p onds (1) They conduct (3) They have high	atoms results polar covalent it electricity. In melting		a O		and the second of the second second	
	(1) molecule-molecule (2) molecule-atom (2) The transfer of electring the formation of (bonds (3) nonpolar (3) What is a characteris (2) They have high young points. (4) They are conduct electricity. It solid must contain	(4) ion cons from sodium a (1) coordinate cove bonds (4) ionic b tic of ionic solids? apor pressures. (e very malleable. 1 it is in the liquid on the solid state it v (1) ionic bonds (2)	n-ion atoms to chlorine alent bonds (2) p onds (1) They conduct (3) They have high	atoms results polar covalent it electricity. It melting in water, will lectricity. This	2	a O		and the section of the section of	
	(1) molecule-molecule (2) molecule-atom (2) The transfer of electring the formation of (bonds (3) nonpolar (3) What is a characteristic (2) They have high yopoints. (4) They are conduct electricity. It solid must contain (bonds (4) coordinate (5) Which compound co	(4) ion cons from sodium a (1) coordinate cove bonds (4) ionic b tic of ionic solids? apor pressures. (a e very malleable. i it is in the liquid a n the solid state it v (1) ionic bonds (2 te bonds ntains ionic bonds	ntions to chlorine alent bonds (2) ponds (1) They conducts (3) They have his state or dissolved will not conduct elements.) metallic bonds (1) NaH(s) (2)	atoms results polar covalent it electricity. gh melting il in water, will lectricity. This (3) covalent C ₆ H ₁₂ O ₆ (s)	2	a O		and the section of the section of	
publica imminis	(1) molecule-molecule (2) molecule-atom (2) The transfer of electring in the formation of (bonds (3) nonpolar (3) What is a characteris (2) They have high young points. (4) They are conduct electricity. It solid must contain (bonds (4) coordinate (3) CH ₃ OH(I) (4) H (6) A compound formed molecular crystal structure (2) molecular crystal structure (2) molecular crystal structure (3) conductivity in the seconductivity in the seconductivity	(4) ion cons from sodium a (1) coordinate cove bonds (4) ionic b fic of ionic solids? apor pressures. (a e very malleable. i it is in the liquid a in the solid state it v (1) ionic bonds (2 te bonds ntains ionic bonds (2)(2) I from potassium a conturn (2) a high	ntions to chlorine alent bonds (2) ponds (1) They conducted (3) They have his state or dissolved will not conducted (4) metallic bonds (1) NaH(s) (2) and chlorine will a melting point	atoms results polar covalent it electricity. gh melting l in water, will lectricity. This (3) covalent c) C ₆ H ₁₂ O ₆ (s) have (1) a (3) good heat	9	a O		and the section of the section of	
	(1) molecule-molecule (2) molecule-atom (2) The transfer of electring the formation of the bonds (3) nonpolar (3) What is a characteristy of the points. (4) They are the points. (4) They are conduct electricity. It is solid must contain the bonds (4) coordinated to the points. (3) CH ₃ OH(I) (4) Here to the points of the points of the points of the points. (3) CH ₃ OH(I) (4) Here the points of the point	(4) ion cons from sodium a (1) coordinate cova bonds (4) ionic b fic of ionic solids? apor pressures. (e very malleable. a it is in the liquid a the solid state it v (1) ionic bonds (2 te bonds ntains ionic bonds (2)(1) I from potassium a cucture (2) a high colid state (4) poo exists in a molecule lar covalent (4) m	ntoms to chlorine alent bonds (2) ponds (1) They conduct (3) They have his state or dissolved will not conduct elements (1) NaH(s) (2) and chlorine will melting point relectrical conduct of iodine? (1) intellic	atoms results polar covalent of electricity. The melting lin water, will lectricity. This (3) covalent c) C ₆ H _{r2} O ₆ (s) have (1) a (3) good heat uctivity in onic (2) polar	2	a O		and the section of the section of	
	(2) molecule-molecule (2) molecule-atom (2) The transfer of electring in the formation of (bonds (3) nonpolar (3) What is a characteris (2) They have high yopoints. (4) They are conduct electricity. It solid must contain (bonds (4) coordinate (3) 'CH ₃ OH(I)' (4) H (6) A compound formed molecular crystal structure conductivity in the solution (5) What type of bond ecovalent (3) nonpolecular (3) nonpolecular (3) nonpolecular (3) nonpolecular (4) nonpolecular (5) covalent (6) nonecular (6) nonecular (7) what type of bond ecovalent (8) nonpolecular (9) nonpole	(4) ion cons from sodium a (1) coordinate cove bonds (4) ionic b fic of ionic solids? apor pressures. (a e very malleable. a it is in the liquid a the solid state it v (1) ionic bonds (2 the bonds ntains ionic bonds (2O(I) I from potassium a cucture (2) a high solid state (4) poo exists in a molecule lar covalent (4) m onia (NH ₃) contain only (3) both cov	ntoms to chlorine alent bonds (2) ponds (1) They conduct (3) They have his state or dissolved will not conduct (4) metallic bonds (1) NaH(s) (2) and chlorine will melting point or electrical conduct electrical conduct (1) in the conduct (2) metallic (3) (1) in the conduct (3) in the conduct (4) in the conduct (5) in the conduct (6) in the conduct (6) in the conduct (7) in the conduct (8) in the conduct (9) in the conduct (1) in	atoms results polar covalent it electricity. gh melting l in water, will lectricity. This (3) covalent 2) C ₆ H _{r2} O ₅ (s) have (1) a (3) good heat uctivity in onic (2) polar is, only conds	9	a O		and the section of the section of	
	(1) molecule-molecule (2) molecule-atom (2) The transfer of electring in the formation of the bonds (3) nonpolar (3) What is a characteristy. It is a characteristy. It is a characteristy. It is solid must contain the bonds (4) coordinated bonds (4) coordinated bonds (4) coordinated bonds (4) coordinated bonds (5) Which compound coordinated bonds (6) A compound formed molecular crystal structure conductivity in the seconductivity in th	(4) ion cons from sodium a (1) coordinate cova bonds (4) ionic b fic of ionic solids? apor pressures. (a e very malleable. i it is in the liquid in in the solid state it v (1) ionic bonds (2 te bonds trains ionic bonds (2O(I) I from potassium a ructure (2) a high solid state (4) poo exists in a molecule lar covalent (4) m onia (NH ₃) contain only (3) both cov nor ionic bonds CI most readily co	ntions to chlorine alent bonds (2) ponds (1) They conducts (3) They have high state or dissolved will not conduct electrical conducts (1) inetallic electrical conducts electricity alent and ionic bonducts electricity	atoms results polar covalent it electricity. gh melting l in water, will lectricity. This (3) covalent 2) C ₆ H ₁₂ O ₅ (s) have (1) a (3) good heat uctivity in onic (2) polar is, only onds	2	a O		and the section of the section of	
	(1) molecule-molecule (2) molecule-atom (2) The transfer of electring in the formation of the bonds (3) nonpolar (3) What is a characteristy. It is solid must contain the bonds (4) coordinated bonds (4) coordinated bonds (4) coordinated bonds (4) coordinated bonds (5) Which compound compound compound formed molecular crystal structure conductivity in the second coordinated bonds (3) CH ₃ OH(I) (4) Here is solution (4) Mat type of bond encovalent (3) nonpolecular crystal structure (3) nonpolecular crystal structure (4) nonpolecular (3) nonpolecular (3) nonpolecular (3) nonpolecular (4) nonpolecular crystal structure (4) nonpolecular (5) which sample of Here is molecular crystal structure (6) Which sample of Here is molecular crystal structure (7) Which sample of Here is molecular crystal structure (8) Which sample of Here is molecular crystal structure (9) Which sample of Here is molecular crystal structure (1) the sample of Here is molecular crystal	(4) ion cons from sodium a (1) coordinate cova bonds (4) ionic b fic of ionic solids? apor pressures. (a e very malleable. i it is in the liquid in in the solid state it v (1) ionic bonds (2 te bonds trains ionic bonds (2O(I) I from potassium a ructure (2) a high solid state (4) poo exists in a molecule lar covalent (4) m onia (NH ₃) contain only (3) both cov nor ionic bonds CI most readily co	ntions to chlorine alent bonds (2) ponds (1) They conducts (3) They have high state or dissolved will not conduct electrical conducts (1) inetallic electrical conducts electricity alent and ionic bonducts electricity	atoms results polar covalent it electricity. gh melting l in water, will lectricity. This (3) covalent 2) C ₆ H ₁₂ O ₅ (s) have (1) a (3) good heat uctivity in onic (2) polar is, only onds	2	a O		and the section of the section of	
	(1) molecule-molecule (2) molecule-atom (2) The transfer of electring in the formation of the bonds (3) nonpolar (3) What is a characteristy. It is solid must contain the bonds (4) coordinated (3) CH ₃ OH(I) (4) Here (4) A compound formed molecular crystal structure conductivity in the solution (3) CH ₃ OH(I) (4) Here (4) A compound formed molecular crystal structure conductivity in the solution (4) Mat type of bond encovalent (3) nonpolecular covalent (3) nonpolecular crystal structure (4) neither covalent (4) neither covalent (5) Which sample of Here (6) Here (7) Here (1) Here	(4) ion cons from sodium a (1) coordinate cova bonds (4) ionic b fic of ionic solids? apor pressures. (a e very malleable. In it is in the liquid a In the solid state it v (1) ionic bonds (2 te bonds Intains ionic bonds (2) (1) I from potassium a ructure (2) a high solid state (4) poo exists in a molecule lar covalent (4) m onia (NH ₃) contain only (3) both cov nor ionic bonds CI most readily co g) (4) HCl(aq) I be most likely to f	ntions to chlorine alent bonds (2) ponds (1) They conducts (3) They have high state or dissolved will not conduct electrical conducts (1) inetallic electrical conducts electricity alent and ionic bonducts electricity	atoms results polar covalent it electricity. The melting in water, will lectricity. This (3) covalent it is (3) covalent it is (3) good heat uctivity in it is, only conds it is, only ecovalent bond	2	a O		and the section of the section of	
	(1) molecule-molecule (2) molecule-atom (2) The transfer of electring the formation of the bonds (3) nonpolar (3) What is a characteris (2) They have high young to bonds. (4) They are conduct electricity. It solid must contain the bonds (4) coordinate (3) CH ₃ OH(I) (4) He (6). A compound formed molecular crystal structure conductivity in the solution (7) What type of bond encovalent (3) nonpolement (3) nonpolement (3) nonpolement (4) neither covalent (9) Which sample of He (12) HCl(I) (3) HCK (10). A proton (H+) would with	(4) ion cons from sodium a (1) coordinate cova bonds (4) ionic b fic of ionic solids? apor pressures. (a e very malleable. In it is in the liquid a In the solid state it v (1) ionic bonds (2 te bonds Intains ionic bonds (2) (1) I from potassium a ructure (2) a high solid state (4) poo exists in a molecule lar covalent (4) m onia (NH ₃) contain only (3) both cov nor ionic bonds CI most readily co g) (4) HCl(aq) I be most likely to f	ntions to chlorine alent bonds (2) ponds (1) They conducted in the conducted in the conducted in the conducted in the chlorine will not conducted in the chlorine in the chlori	atoms results polar covalent it electricity. The melting in water, will lectricity. This (3) covalent it is (3) covalent it is (3) good heat uctivity in it is, only conds it is, only ecovalent bond		which sample are the particles arranged in a regular geometric pattern? $HCl(t)$ (2) NaCl(aq) (3) $N_2(g)$ (4) $L_2(s)$ der the same conditions of temperature and pressure, a liquid differs from a because the particles of the liquid are in constant straight-line motion	occupy tween them	 sxist at equilibrium? boiling point melting point	ater equilibrium occurs at a temperature 273 K (4) 373 K