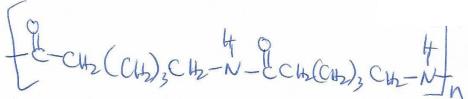
Test 2:	Introduction to Chemistry II Lectur	e Spring 2021 Dr. H	Jahn (9 am MWF) 3/10/	21 Wednesday The Cit	tadel
Name	L on		tes	st# 26	
110000	7		-		
	short Answer portion of the test, please e NO partial credit	se show work on all quest	tions for partial and full cre	edit. On the multiple ch	oice questions,
Part I:	Multiple Choice: 60 pts (4 pts per	question)		64	(
MULT	TPLE CHOICE. Choose the one a	lternative that best cor	mpletes the statement o	r answers the question	
	1) One example of a condensatio	n polymer is			1) 13
	A) polyvinyl chloride.		B) nylon.		
	C) polyvinyl acetate.		D) Plexiglass.		
					Λ
	2) The segment of a polymer sho	wn below represents a			2)
					-
	0 0				
		U_CU_C			
	~c~ch2ch2~c~oc.	uScuSo.			
	A) polyester.	b) polyamide.	C) polyethylene.	D) polystyrene.	
	A) polyesiel.) polyaniac.	c) poryettiyicite.	D) polystyrene.	
	3) The substance with the formu	la shown helow is a(n)			3)
	o) The buoblance what are formu	in bitowit become in u(it)			
	CH3CH2CH2CH2CI	H2CH2CH2CH2CH2C	H2CH2COOH	a	
	A) saponin.	3) detergent.	C) fatty acid.	D) alcohol.	
	4) Animal fats and vegetable oil	can be converted to soa	ips by reaction with		4)
	A) sodium phosphate.		B) sodium carbonate.		
	C) sodium hyperchlorite.	(D) sodium hydroxide.		
				1	
	5) Which of the following statem			*	5)
	A) The hydrophobic end ha		in.		
	B) The hydrophilic end is i				
x	C) The hydrophilic end has		ι.		
	D) Soaps form micelles in s	solution.			
*	c) mi	1.1 ADC 1			6 A
	6) The major advantage of LAS	detergents over ABS de			6) /
	A) are biodegradable.		B) lack phosphates.		
	C) are effective in hard wa	ter.	D) are soil based.		
	7) The active is an diam't in 11-	ina laundwr blaaches is			7)
	7) The active ingredient in chlor	me launury bleaches is			")
	A) chlorine, Cl ₂ .	. 001	B) a mixture of CFCs.		
	C) sodium hypochlorite, N	aUCI.	D) sodium chloride, N	IaCI.	
	0.747		1 66 12 1 6		e) (
	8) Which generally does NOT r	-			8)
	A) drug	B) food additive	C) cosmetic	D) a cooking oil	

9) Deodorants act by				9) _	H	
(A) destroying odo	r-causing bacteria.					
B) reacting with s	weat glands to stop perspira	ition.	78			
C) producing enzy	mes.					
D) breaking down	odorous chemicals as they	are produced.			25 34	
					0	
10) The fraction of comp	ounds in a perfume that ha	ve the highest volatility	would be called the	10)	13	
A) base note.	B) top note.	C) end note.	D) middle note.	1000		
,			***************************************		0	
11) Chloroplosto in plani	la communit			11)	(
11) Chloroplasts in plants convert						
A) light energy into electrical energy. B) light energy into heat energy. C) light energy into chemical energy. D) heat energy into chemical energy.						
C) light energy in	to chemical energy.	D) neat energy in	to chemical energy.			
				12)		
	12) Which of the following elements is NOT found in carbohydrates?					
A) oxygen	B) carbon	C) hydrogen	D) sulfur		~	
				* *	1	
13) Iodine number is a measure of						
and the same of th	nsaturation of a fat.					
	iodine atoms in a carbohyd	rate.				
	iodine atoms in a fat.					
	iodine atoms in a protein.					
14) The bond between two amino acids is called a peptide bond. What type of bond is a peptide bond?						
			D) amine	14)		
A) glyceride	B) anhydride	C) amide	D) anime			
				15)	0	
15) The primary structure of a protein is determined by						
	g of protein molecules to fo					
	oonding that gives the prote	in three dimensional sha	ape.			
C) the amino acid						
D) the order of an	nino acids in the protein.					
16) Which of the following involves the formation of a covalent bond?						
A) hydrogen bone		B) dispersion for	ces	16)		
C) salt bridges	-0	D) disulfide linka				

Please show work for all questions for partial and full credit. (40 pts) Dr. Hahn Intro Chemistry II Lecture

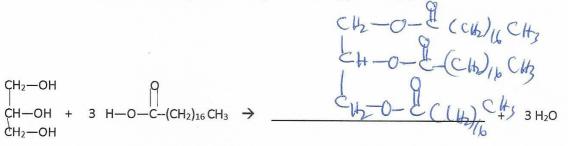
1. a. Complete the following reaction for the synthesis of nylon using the format (parenthesis and n) to show a polymer product. (6 pts)



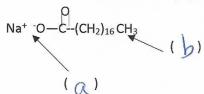
b) The above reaction produces what type of polymer (2 pts)

[(addition polymer) or (natural polymer) or (condensation polymer)] (circle one)

2. (a) Complete the following reaction to synthesize a triglyceride. (6 pts)

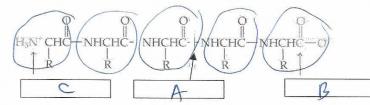


- (b) The fatty acid above is [(an unsaturated fatty acid) or (a saturated fatty acid)] (circle one) (2 pts)
- (c) An unsaturated fatty acid has [lower or (higher)] (circle one) melting point than a saturated fatty acid. (2 pts)
- 3. Which side of the molecule is (a) hydrophilic (b) hydrophobic Identify the molecule below by filling in the parenthesis with a letter. (4 pts, 2 pts each)



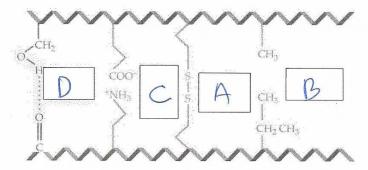
4. (a) How many amino acids are shown in the below molecule

[(4 amino acids) or (5 amino acids) or (2 amino acids)] (circle one choice) (4 pts)



- (b) fill in the blank with a letter (A) peptide bond (B) C terminal end (C) N terminal end (6 pts, 2 pts each blank)
- 4. (a) Match the following type of linkage in proteins with the shown by filling in the box with one of the possible

(A) disulfide linkage (B) dispersion force (C) ionic bonds (salt bridge) (b) hydrogen bonding (4 pts, 1 pt each blank)



(b) Match the above type of linkage to category of bonding by filing the line with the letters. You may not use all letters and each blank may have more than one answer. (4 pts, 2 pts each blank)

covalent bond ______ intermolecular force ______ B