

MINISTRY OF EDUCATION
SECONDARY ENGAGEMENT PROGRAMME

GRADE 11

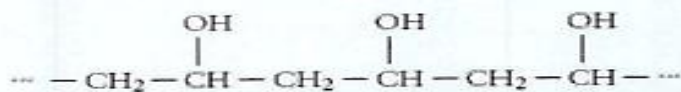
CHEMISTRY

WEEK 10

LESSON 1- WORKSHEET

1. The polymerization of propene, $\text{CH}_3\text{CH}=\text{CH}_2$, can be classified as
- a) an addition reaction
 - b) an elimination reaction
 - c) a substitution reaction
 - d) a condensation reaction

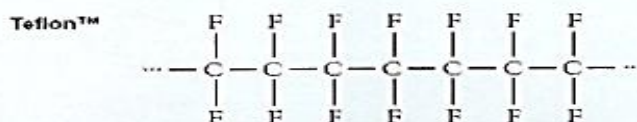
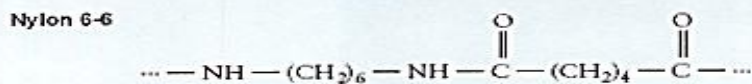
2. Polyvinyl alcohol has the following structure.



What is the monomer that is used to form this polymer?

- (a) $\text{HO} - \text{CH}_2 - \text{CH}_3$
- (b) $\text{HO} - \text{CH}_2 - \overset{\text{O}}{\parallel}{\text{CH}}$
- (c) $\text{HO} - \text{CH} = \text{CH}_2$
- (d) $\overset{\text{O}}{\parallel}{\text{HC}} - \text{CH}_3$

3. Nylon 6-6 and Teflon™ are two widely used synthetic polymers. Their structures are shown below.

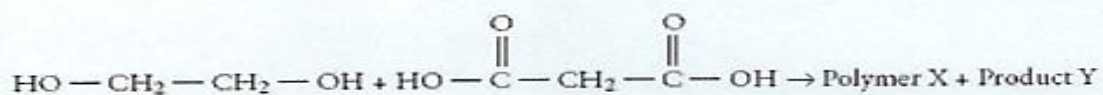


Which of the following types of reactions are responsible for the formation of these polymers?

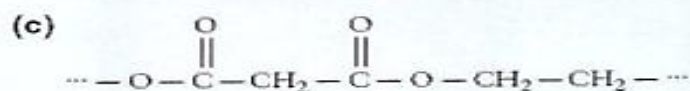
	Nylon 6-6	Teflon™
(a)	Addition	Condensation
(b)	Condensation	Substitution
(c)	Condensation	Addition
(d)	Substitution	Condensation

Use the following information to answer questions 4, 5, and 6.

Two organic compounds react together to form a polymer as shown.



4. Which of the following is polymer X?



5. Product Y formed in this reaction is

- a) carbon dioxide gas
- b) hydrogen gas
- c) oxygen gas
- d) water

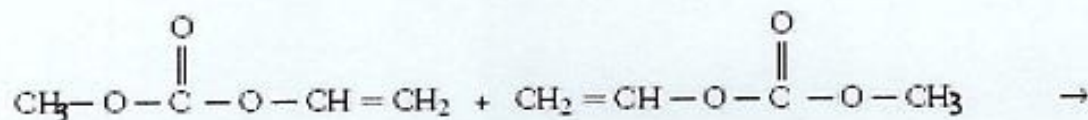
6. What type of polymerization reaction occurs?

- a) condensation polymerization
- b) reformation polymerization
- c) addition polymerization
- d) radical polymerization

7. DNA is a natural polymer composed of

- a) glucose monomers
- b) nucleotide monomers
- c) amino acid monomers
- d) cellulose monomers

8. The reactants to a polymerization are given below. Draw the product for the polymerization reaction. Include at least three linkages for the polymer product. Classify the polymer as an addition polymer or a condensation polymer.



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LESSON 1

Answers

1. A
2. C
3. C
4. C
5. D
6. A
7. B
8. The reaction is an addition polymerization.