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Unit Test Project

NALANDA VIDYALAYA

Grade 11

SCIENCE

Unit: 14

Hydrocarbons and Their derivatives

01) Which one of the following is an example for branched polymer.

> Rubber i)

ii) Polythene

iii) Vulcanized rubber

Teflon iv)

02) Select a derivative of ethene.

i)
$$H \subset C = C \subset H$$

ii)

iii)
$$H CH_3$$

$$C \equiv C$$

iv)

03) The representation of the polymer polythene is,

i)
$$H \subset C = C \subset H$$

ii)

04) Select the best matching pair.

Natural Polymer	Artificial Polymer
i) Rubber	Bakelite
ii) DNA	Teflon
iii) Protein	Terylene
iv) Starch	Teflon

05)	To make non – stick cooking pans and snow shoes, we use								
	i)	Teflon	ii)	PVC	iii)	Polythene	iv)	Rubber	
06)	What is a "Polymer"?								
	i)	i) Very large molecule formed from linking together, a large number of small molecules.							
	ii)	Small molecules contributing to form polymers.							
	iii)	The basic structural unit contained in a polymer.							
	iv)	a compound derived by the displacement of the four hydrogen atoms in ethe and							
		fluorine.							
07)	In alkenes bonds are located between carbon atoms.								
	i)	Single	ii)	Double	iii)	Tripple	iv)	No	
08)	Formula for tetraflourethene is,								
08)					iii)	C_2F_4	iv)	CH_4	

10) The given molecule represents.

i)

iii)

Propane and butane

Alkyne and sodium

i) isoprene

ii) butane

ii)

iv)

propane and cellulose

Heptane and butane

iii) pentane

iv) LP gas

STRUCTURED ESSAY QUESTIONS

01) The polymer polythene is given below.

- i) Write down the repeating unit of polythene
- ii) Write down the formula for the monomer polythene.
- iii) Represent the polymer polythene in short form.
- iv) To which type of hydrocarbon does the polythene belong.
- 02) Complete the table given.

Object	Features	Name of the	Formula for the
		polymer	monomer unit
Polythene bags			
Water pipes			
Non – stick pans used			
for cooking			

- i) What is the definition for polymer.
- ii) Write 4 names of natural polymers.

ESSAY QUESTIONS

- 01) Natural rubber is obtained from the latex of the rubber tree.
 - i) What organic compound produces natural rubber on polymerization?
 - ii) What property of rubber latex is measured by the metrolac?
 - iii) Name a chemical substance that can be used to coagulate rubber latex?
 - iv) Elasticity of rubber improved by vulcanization. What is the element mainly used to vulcanize rubber?
 - v) Illustrate the structure of monomer of rubber.
- 02) The fuel petroleum contain hydrocarbons.
 - i) Write the 3 types of hydrocarbons based on their structure.
 - ii) Observe the hydrocarbons given below and write to which it belongs.

b)
$$H \subset C \subset C$$

- iii) If fluorine (f) is substituted to the given (ii) b structure, write its formula and draw the structural formula.
 - a) Write the name we use to identify it
 - b) What natural polymer is similar with the mentioned polymer.
 - c) Write 2 usages of polythene with their special property used for the task.