

QUESTIONS AND ANSWERS

MANUFACTURING WITH POLYMERS

This mobile revision pdf is based on detailed work found in the 'MATERIALS' and 'EQUIPMENT' sections.

Tap on the green and yellow link buttons below to go to the website.



Tap the blue button to view all work covered by this Revision PDF



QUESTIONS AND ANSWERS MANUFACTURING WITH POLYMERS

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HOW TO USE THIS REVISION PDF

Read and attempt answering each question, before following the link to a potential answer. Also, consider working in pairs.

QUESTIONS ONE TO FIVE

QUESTIONS SIX TO TEN

QUESTIONS ELEVEN TO SIXTEEN

**TAP / CLICK THE LINK
BUTTON FOR ALL
MOBILE APPS**



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QUESTION 1a

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Crude oil can be processed into
plastics / polymers.

**Name five plastics / polymers
derived from crude oil.**

Tap the image a potential answer



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slide / page.



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Contents page

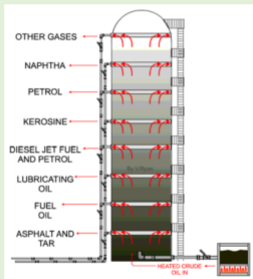


QUESTION 1b

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What is the function of a Distillation Tower?

Tap the image a potential answer



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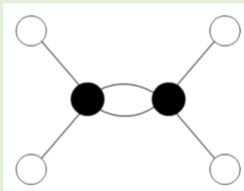


QUESTION 1c

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What is a 'monomer'?
Sketch a 'long chain monomer'.

Tap the image a potential answer



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QUESTION 2a

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What is a 'thermosetting' plastic?

Name four thermosetting plastics and include practical applications.

Tap the image a potential answer



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QUESTION 2b

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**What is a thermoplastic?
Name four thermoplastics and
include practical applications.**

Tap the image a potential answer



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QUESTION 3a

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What are Thermoplastic Elastomers (TEPs)?

Tap the image a potential answer



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QUESTION 3b

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What are the main physical properties of TEPs??

Tap the image for a potential answer



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QUESTION 3c

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Name five thermoplastic elastomers (TEPs) and describe their practical applications.

Tap the image for a potential answer



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QUESTION 3d

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Why is Thermoplastic Elastomer (TPE), suitable for the manufacture of a TV remote control?

Tap the image for a potential answer



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QUESTION 4a

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What is polylactide and why is it growing in popularity?

Tap the image for a potential answer



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QUESTION 4b

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Name five disposable products, ideally manufactured from polylactide.

Tap the image for a potential answer



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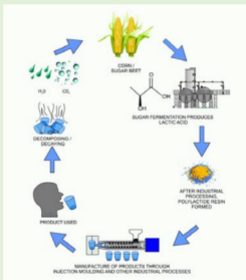


QUESTION 4c

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Describe the lifecycle of polylactide.

Tap the image for a potential answer



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QUESTION 5a

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What is Biopol?

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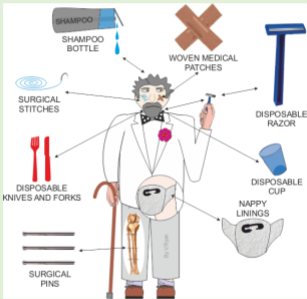


QUESTION 5b

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Describe practical applications of Biopol?

Tap the image for a potential answer



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QUESTION 6a

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Why is the development of oxo-degradable plastics increasing?

Tap the image for a potential answer



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QUESTION 6b

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Describe practical applications of oxo-degradable plastics.

Tap the image for a potential answer



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QUESTION 7a

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Why is Polyethylene terephthalate or PET / PETE, suitable for the packaging of some food products?

Tap the image for a potential answer

PET/PETE GRANULES



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QUESTION 7b

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**List six practical applications of
PET / PETE.**

Tap the image for a potential answer



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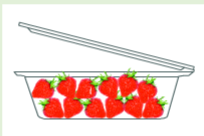


QUESTION 7c

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Why is PET / PETE suitable specifically, for the two types of packaging shown below

Tap the image for a potential answer



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QUESTION 8

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Why is polypropylene suitable for the manufacture of this modernist chair?

Tap the image for a potential answer

MODERN PLASTIC CHAIR



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QUESTION 9a

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Nylon is one of the most useful polymers.

Briefly explain the history of its development, including the name of its inventor?

Tap the image for a potential answer



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QUESTION 9b

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Describe the physical properties of nylon, that make it such a useful material.

Tap the image for a potential answer



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QUESTION 9c

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List six practical applications of nylon.

Tap the image for a potential answer



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QUESTION 10a

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Describe the early development of polyurethane / foam rubber?

Tap the image for a potential answer



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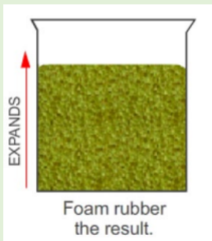


QUESTION 10b

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How does the manufacture of polyurethane and foam rubber differ?

Tap the image for a potential answer



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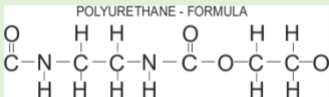


QUESTION 10c

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List the physical properties of polyurethane and foam rubber?

Tap the image for a potential answer



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QUESTION 10d

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List four practical applications of foam rubber.

List four practical applications of polyurethane.

Tap the image for a potential answer



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QUESTION 11

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The casing of the remote control, for a model railway system is shown below. It has been manufactured by Injection Moulding.

**What is injection moulding?
(include a sketch and notes, in your answer)**

Tap the image for a potential answer



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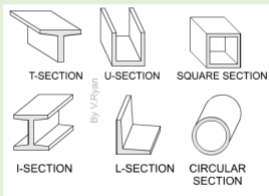
QUESTION 12

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The polymer sections shown below, have been manufactured through a process called extrusion.

With a sketch(s) and notes, explain this process.

Tap the image for a potential answer



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QUESTION 13

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Recycling bins are just one product, manufactured by blow moulding.

Using a sketch(s) and notes, describe blow moulding.

Tap the image for a potential answer



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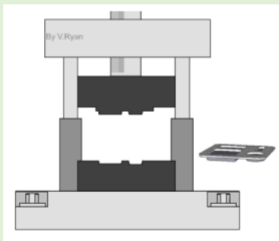
QUESTION 14

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Compression moulding can be used to shape and form some polymers.

What is compression moulding?

Tap the image for a potential answer



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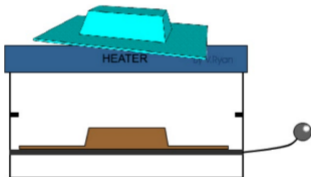
QUESTION 15.

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Vacuum forming is common manufacturing process in schools and industry.

With notes and sketches, explain the process.

Tap the image for a potential answer



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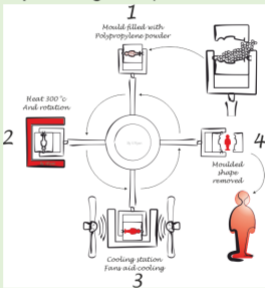


QUESTION 16

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Describe the process called 'rotational moulding'. Include notes and a sketch(s).

Tap the image for a potential answer



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