

puzzles for unit 1

1. Crossword Puzzle

Clues:

Across

1. The property that describes how easily a drug dissolves in water.
2. A type of polymer that breaks down in the body.
3. A system designed to release a drug over an extended period.
4. The process by which a drug moves from an area of high concentration to low concentration.

Down

2. The term for a drug delivery system that releases its active ingredient at a predetermined rate.
3. A system that releases a drug in response to changes in pH or ions.
5. The property describing a drug's ability to cross cell membranes.
7. The main advantage of controlled drug delivery systems is improved patient _____.

2. Match the Columns

A	B
1. Matrix system	a. Ion exchange resin
2. Biodegradable polymer	b. Diffusion-based
3. Drug with short half-life	c. Suitable for CDDS
4. Targeted drug delivery	d. PLGA
5. Ion exchange system	e. Site-specific release

3. Fill in the Blanks

1. _____ is the movement of drug molecules from a region of higher concentration to lower concentration.
2. The main disadvantage of controlled release systems is the risk of _____ dumping.
3. _____ are used to control the release of drugs in controlled drug delivery systems.

4. The property of a polymer that allows it to degrade in the body is called _____.
5. A drug with a very _____ therapeutic index is not suitable for controlled release systems.

4. Riddle Me This

1. **I am a system that releases my medicine slowly, keeping you healthy for longer. What am I?**
(Answer: Controlled release system)
2. **I am made of long chains, sometimes natural, sometimes synthetic, and I help drugs release at the right time. What am I?**
(Answer: Polymer)
3. **I can be extended, sustained, or delayed, but always controlled. What am I?**
(Answer: Drug release)

5. True or False

1. All drugs are suitable for controlled release formulations.
2. Polymers can be natural or synthetic.
3. Controlled release systems always reduce side effects.
4. The diffusion principle is used in some controlled release formulations.
5. Drugs with a very short half-life are ideal for controlled release.

Answer Keys

Crossword:

1. Solubility, 2. Controlled, 3. Ion exchange, 4. Biodegradable, 5. Permeability, 6. Sustained, 7. Compliance, 8. Diffusion

Match the Columns:

1-b, 2-d, 3-c, 4-e, 5-a

Fill in the Blanks:

1. Diffusion
2. Dose
3. Polymers

4. Biodegradability
5. Narrow

True or False:

1. False
2. True
3. False
4. True
5. False