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Classtest 1

Section: 72_G

CSE 115: Introduction to Biology and Chemistry for Computation

Date: 10/06/2026 Time: 35 minutes

1.	A chemical factory uses computers, sensors, and a Distributed Control System to monitor temperature, pressure, flow rate, and chemical concentration during production. At the same time, the factory also monitors wastewater and harmful gas emissions to reduce environmental pollution. Explain how computers can be used for real-time process control, monitoring, and environmental protection in this situation. Mention at least two benefits of using computer-based systems in chemical industries.	5
2.	A biology student is studying two genetic molecules found inside a cell. One molecule stores hereditary information in a double-helix structure, while the other helps carry genetic instructions for protein synthesis. Explain the structure of the molecule that stores genetic information. Then compare it with the molecule that carries genetic instructions by mentioning at least three major differences.	5
3.	A food testing laboratory wants to check whether a soft drink contains harmful chemicals or contaminants. Explain how chromatography can help analyze the sample and identify different components. Then mention some other application areas where chromatography can be used.	5