PHYSICAL AND CHEMICAL PROPERTIES OF NATURAL GAS

Task 1. Choose the correct answer.

1. What is the primary reason natural gas is expected to grow in popularity as an energy source in the future?

A. It is more cost-effective than other fossil fuels.

B. It provides sustainable energy supplies and reduces environmental impact.

C. It is more readily available than other fossil fuels.

D. It has a higher energy density than other fossil fuels.

2. Which of the following is not a typical component of natural gas?

A. Methane

B. Ethane

C. Propane

D. Nitrogen

3. What is the main purpose of adding an odorant to natural gas?

A. To improve its combustion properties

B. To increase its heating value

C. To detect the presence of gas leaks

D. To reduce its toxicity

4. How is the heating value of natural gas typically determined?

A. By direct measurement using calorimetry

B. By analyzing the gas composition and computing the value

C. By measuring the specific gravity of the gas

D. Both A and B

5. What is the Wobbe Index used to measure?

A. The heating value of the gas

B. The heat input to an appliance

C. The flame speed factor of the gas

D. The specific gravity of the gas

6. Which of the following is a key benefit of using natural gas over oil or coal?

A. It is more abundant and readily available.

B. It produces fewer greenhouse gas emissions.

C. It has a higher energy density.

D. It is more cost-effective.

7. What is the standard unit used to measure the heating value of natural gas?

A. British Thermal Unit (Btu)

B. Wobbe Index

C. Specific gravity

D. Flame speed factor

Choose the correct statements:

1. Natural gas is heavier than air.

2. The heating value of natural gas is measured in British thermal units.

3. The Wobbe Index is used to measure the energy content of natural gas.

4. Natural gas is odorised to help detect leaks.

5. The specific gravity of natural gas is the ratio of gas density to the density of water.

6. The gas deviation factor is also known as the compressibility factor.

7. The isothermal compressibility of gases is also called the bulk modulus of elasticity.