**Question 1:**

* **Q:** Explain the steps of the scientific method as applied in economics. (6 marks)
* **A:** The scientific method in economics involves the following steps:
  1. **Observation:** Identifying economic phenomena or trends.
  2. **Hypothesis Formation:** Developing a testable statement about the relationship between variables.
  3. **Testing:** Collecting data and conducting experiments to test the hypothesis.
  4. **Analysis:** Analyzing the data to determine whether it supports or refutes the hypothesis.
  5. **Conclusion:** Drawing conclusions based on the analysis.
  6. **Peer Review:** Subjecting the findings to review by other economists to validate the results. Each step is crucial in ensuring the reliability and validity of economic research.

**Question 2:**

* **Q:** Differentiate between positive and normative economics with examples. (4 marks)
* **A:** Positive economics deals with objective analysis based on facts and describes how the economy actually works. For example, "An increase in the minimum wage will reduce employment among low-skilled workers" is a positive statement. Normative economics involves value judgments and opinions about what the economy should be like. For example, "The government should increase the minimum wage to reduce poverty" is a normative statement. The key difference is that positive economics is descriptive, while normative economics is prescriptive.

**Question 3:**

* **Q:** What is "ceteris paribus," and why is it important in economic analysis? (3 marks)
* **A:** "Ceteris paribus" is a Latin phrase meaning "all other things being equal." It is important in economic analysis because it allows economists to isolate the relationship between two variables by holding other influencing factors constant. This simplification helps in understanding the direct effect of one variable on another without the interference of other variables, making the analysis clearer and more focused.

**Question 4:**

* **Q:** Describe the role of assumptions in economic models. (3 marks)
* **A:** Assumptions in economic models simplify the analysis by holding certain variables constant (ceteris paribus) and focusing on key relationships. They help in creating a manageable and understandable model by excluding less relevant details. For example, assuming perfect competition in a market model allows economists to study the behavior of supply and demand without the complexities of monopolies or oligopolies.

**Question 5:**

* **Q:** Explain the difference between endogenous and exogenous variables in an economic model. (4 marks)
* **A:** Endogenous variables are those whose values are determined within the economic model and are influenced by other variables in the model. For example, in a supply and demand model, the price and quantity of goods are endogenous variables. Exogenous variables, on the other hand, are determined outside the model and affect the endogenous variables without being influenced by them. For example, external factors like government policy or technological changes can be considered exogenous variables. The distinction is important because it helps in understanding the factors that are under the control of the model versus those that are not.

**Question 6:**

* **Q:** How does the use of data support the scientific method in economics? (5 marks)
* **A:** Data is crucial in supporting the scientific method in economics as it provides the empirical evidence needed to test hypotheses, validate models, and support or refute economic theories. By collecting and analyzing data, economists can determine whether their hypotheses about economic relationships hold true in the real world. For instance, data on consumer spending can help test a hypothesis about the impact of tax cuts on economic growth. Reliable data ensures that the conclusions drawn are based on actual evidence, making economic analysis more accurate and credible.