

Assertion and Reason

An Assertion is an affirmation, a declaration or a strong statement. Normally assertions have reasons. In this question type, an assertion is first given followed by a reason. You are supposed to first judge whether the assertion (A) is true and then decide on whether the reason (R) is true and in case both A and R are true then we need to see whether the reason is the correct explanation of the Assertion. The following solved examples will help you get a clearer understanding of this question type.

Directions: For the Assertions (A) and Reasons (R), choose the correct alternative from the following.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) If both A and R are false.

1. **Assertion** Crude oil is abundantly found in nature.

Reason It is the main raw material for all automobiles.

Solution Both Assertion and Reason are true but the Reason does not explain the Assertion. Hence, (b) is the answer.

2. **Assertion** Anil Kumble lost his place in the Indian ODI squad sometime back.

Reason In spite of being India's best spinner he was considered to be too old for ODIs.

Solution Both Assertion and Reason are right and the reason correctly explains the assertion. Hence (a) is the right answer.

3. **Assertion** Over the past few decades, there has been drastic global warming.

Reason The push for economic development has increased to dangerous proportions the emission of greenhouse gases into the atmosphere.

Solution Green house gases are the root cause of global warming. Hence both A and R are true and R explains A. Hence, option (a) is correct.

4. **Assertion** Kerala is the largest state in India.

Reason Some of the leading car manufacturing companies of the world are Japanese.

Solution The Assertion is false because Kerala is not the largest state in India. R is true but it is not related to Assertion. Hence, option (d) is correct.

5. **Assertion** The filament inside a bulb is made of copper.

Reason Usually there is vacuum in the bulb.

Solution A is false because a bulb's filament is made of Tungsten and not copper. R is also false because inert gases or nitrogen are filled inside the bulb and there is no vacuum in the bulb. Hence, option (e) is correct.

EXERCISE

Directions: For the Assertion (A) and Reason (R) below, choose the correct alternative from the following.

(a) Both A and R are true and R is the correct explanation of A.

(b) Both A and R are true but R is not the correct explanation of A.

(c) A is true but R is false.

(d) A is false but R is true.

1. **Assertion** In medical parlance with respect to blood groups, a person with a blood group of 'O' is called Universal Donor.

Reason A person with the 'AB' blood group can accept blood of all types, i.e., A, B, AB and O.

2. **Assertion** The Ozone layer present in the upper atmosphere of earth is beneficial for sustaining life on earth.

Reason The Ozone layer blocks the harmful ultraviolet rays from the Sun and thus protects life on earth.

3. **Assertion** Mahatma Gandhi is considered to be the father of the Indian Nation.

Reason The name 'India' was coined by Mahatma Gandhi.

4. **Assertion** Diesel oil is cooking medium.

Reason It is also used in diesel cars.

5. **Assertion** Water is essential for life.

Reason It is formed using three parts of hydrogen and one part of oxygen.

6. **Assertion** The phenomena of nuclear fission generates great energy.

Reason The process in which a nucleus is broken into two parts is called nuclear fission.

7. **Assertion** India is a sovereign country.
Reason Its parliament is based in Delhi.
8. **Assertion** When velocity is kept constant and wavelength is halved, then the frequency is doubled.
Reason $\text{Velocity} = \text{frequency} \times \text{wavelength}$
9. **Assertion** An object immersed in a bottle of water appears larger than it actually is.
Reason It is because of refraction.
10. **Assertion** Four stroke engines are more efficient than two stroke engines as far as fuel consumption is concerned.
Reason Four stroke engines have lower wastage of petrol in their operation.
11. **Assertion** One should not take medicines without a prescription.
Reason Taking medicines without prescription is dangerous because only the doctor knows the actual components in a medicine and the possible side effects due to taking the medicine.
12. **Assertion** Harshad Mehta was responsible for a major bull run in the Indian Stock market.
Reason Harshad Mehta was known as the “big bull”.
13. **Assertion** It has been observed that buffaloes like to remain in the water during the summer.
Reason Contact with water cools the body in the summer.
14. **Assertion** Iron is a good conductor of electricity.
Reason If you touch an iron rod which is exposed to electric current, you will get an electric shock.
15. **Assertion** If you touch an iron rod which is exposed to electric current, you will get an electric shock.
Reason Iron is a good conductor of electricity.
16. **Assertion** The price of a stock is determined on the basis of the demand and supply of the stock.
Reason The value of the sensex increases whenever there is a heavy demand for the stocks which form the Sensex.
17. **Assertion** In the Indian democratic system, the cabinet ministers are appointed by the President.
Reason The Prime minister plays an advisory role.
18. **Assertion** India is a country of diverse cultures, customs and languages.
Reason What we now call India is the modern version of Bharat.
19. **Assertion** India’s President is appointed on a five-year term.
Reason Pratibha Patil was appointed as India’s first woman president in 2007.

20. **Assertion** The World Bank is a leading international financial institution.

Reason Ever since its formation, it has played a major role in disbursing aid and support to economies across the world.

21. **Assertion** India won the inaugural 20-20 world cup cricket tournament.

Reason A young team played fearless and brilliant cricket to win the inaugural T20 world cup.

22. **Assertion** As the pressure increases, the volume decreases if the temperature is constant.

Reason When temperature is constant, pressure and volume are inversely proportional to each other.

23. **Assertion** The Y2k problem had the entire computer industry in a fix towards the end of the 20th century.

Reason The Y2k problem emerged due to the fact that the date field in computers had only two digits.

24. **Assertion** Amartya Sen was awarded the Nobel Prize for Economics.

Reason Amartya Sen has made an invaluable contribution in the field of developmental economics.

25. **Assertion** Manmohan Singh is widely recognised as the chief architect of liberalisation in India.

Reason Manmohan Singh was the finance minister who first started opening up the Indian economy in 1991.

Answer Key

1. (b)	2.(a)	3. (c)	4. (d)
5. (c)	6.(b)	7. (b)	8. (a)
9. (a)	10.(a)	11. (a)	12. (b)
13. (a)	14. (b)	15. (a)	16. (b)
17. (b)	18. (b)	19. (b)	20. (a)
21. (a)	22. (a)	23. (a)	24. (a)
25. (a)			

Solutions

- Both A and R are true, but R is not the reason for A. Hence, option (b) is correct.

2. Both A and R are true, and R is the reason for A. Hence, option (a) is correct.
3. A is true but R is false. Hence, option (c) is correct.
4. A is false but R is true. Hence, option (d) is correct.
5. A is true but R is false. Hence, option (c) is correct.
6. Both A and R are true, but R is not the reason for A. Hence, option (b) is correct.
7. Both A and R are true, but R is not the reason for A. Hence, option (b) is correct.
8. Both A and R are true, and R is the reason for A. Hence, option (a) is correct.
9. Both A and R are true, and R is the reason for A. Hence, option (a) is correct.
10. Both A and R are true, and R is the reason for A. Hence, option (a) is correct.
11. Both A and R are true, and R is the reason for A. Hence, option (a) is correct.
12. Both A and R are true, but R is not the reason for A. Hence, option (b) is correct.
13. Both A and R are true, and R is the reason for A. Hence, option (a) is correct.
14. Both A and R are true, but R is not the reason for A. Hence, option (b) is correct.
15. Both A and R are true, and R is the reason for A. Hence, option (a) is correct.
16. Both A and R are true, but R is not the reason for A. Hence, option (b) is correct.
17. Both A and R are true, but R is not the reason for A. Hence, option (b) is correct.
18. Both A and R are true, but R is not the reason for A. Hence, option (b) is correct.
19. Both A and R are true, but R is not the reason for A. Hence, option (b) is correct.
20. Both A and R are true and because of the reason the assertion is true. Hence, option (a) is correct.
21. Both A and R are true and because of the reason the assertion is true. Hence, option (a) is correct.
22. Both A and R are true and because of the reason the assertion is true. Hence, option (a) is correct.
23. Both A and R are true and because of the reason the assertion is true. Hence, option (a) is correct.
24. Both A and R are true and because of the reason the assertion is true. Hence, option (a) is correct.
25. Both A and R are true and because of the reason the assertion is true. Hence, option (a) is correct.