Class: VIII   **Subject: Mathematics**

Topic: Comparing Quantities and Direct and Inverse Variation

Read the instructions carefully and answer the following questions. Assertion and Reason Based Questions This type of reasoning questions consists of two statements; an assertion (statement of fact) and a reason (explanation for the assertion). You have to determine whether each statement is correct. If both the statements are correct, you have to determine whether the reason supports the assertion. There will be four answer choices for the possible outcomes and you have to select the correct one.

Q1. **Assertion (A): An item marked at Rs 840 is sold for Rs 714.The discount is Rs 126.**

Reason (R): Discount is a reduction given on the Marked Price (MP) of the article.

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.

Q2. **Assertion (A): Compound interest is always greater than simple interest.**

Reason (R): Principal remains the same under Simple Interest, while it changes year after year under compound interest.

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.

Q3**. Assertion (A): If the number of workers increase, the time required to complete the work will decrease.**

Reason (R):The time required to complete a piece of work is inversely proportional to the number of workers.

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.

Q4. (Value Added Tax (VAT)) Waheeda bought an air cooler for Rs 3300 including a tax of 10%. Find the price of the air cooler before VAT was added.

Q5. An electric pole, 14 meters high, casts a shadow of 10 meters. Find the height of a tree that casts a shadow of 15 meters under similar conditions.

Q6. The list price of a frock is Rs 220. A discount of 20% is announced on sales. What is the amount of discount on it and its sale price.

Q7. The population of a city was 20,000 in the year 1997. It increased at the rate of 5% p.a. Find the population at the end of the year 2000.

Q8 **CASE STUDY**

Ram starts his journey to a certain place by Car at 9am and reaches the place at 1pm.If
he drives at a speed of 30 km / hr .On the basis of above information answer the following questions.
a) Time taken by Ram to reach his destination is
i) 2hr   ii) 5hr   iii) 4hr   iv) 1hr
b) The total distance covered by him
 i) 60km   ii) 90 km   iii) 30 km   iv) 120 km
c) By how much should he increase speed so that he can reach the place by 12 noon.
i) 40 km/hr   ii) 20 km/hr   iii) 10 km/hr   iv) 30 km/hr