

Class XI

Mathematical Reasoning(Basic)

Objective type Questions (1 marks)

Choose the correct answer out of the four given options in each of the following questions.

- The negation of the statement "101 is not a multiple of 3" is**
(A) 101 is a multiple of 3. (B) 101 is a multiple of 2.
(C) 101 is an odd number. (D) 101 is an even number.
- The connective in the statement " $2 + 7 > 9$ or $2 + 7 < 9$ " is**
(A) and (B) Or (C) $>$ (D) $<$
- The connective in the statement "Earth revolves round the sun and moon is a satellite of earth" is**
(A) or (B) Earth (C) sun (D) and
- The negation of the statement "A circle is an ellipse" is**
(A) An ellipse is a circle. (B) An ellipse is not a circle.
(C) A circle is not an ellipse. (D) A circle is an ellipse.
- The negation of the statement "72 is divisible by 2 and 3" is**
(A) 72 is not divisible by 2 or 72 is not divisible by 3.
(B) 72 is not divisible by 2 and 72 is not divisible by 3.
(C) 72 is divisible by 2 and 72 is not divisible by 3.
(D) 72 is not divisible by 2 and 72 is divisible by 3.
- The negation of the statement "Plants take in CO_2 and give out O_2 " is**
(A) Plants do not take in CO_2 and do not give out O_2 .
(B) Plants do not take in CO_2 or do not give out O_2 .
(C) Plants take in CO_2 and do not give out O_2 .
(D) Plants take in CO_2 or do not give out O_2 .
- The statement "If x^2 is not even, then x is not even" is converse of the statement**
(A) If x^2 is odd, then x is even. (B) If x is not even, then x^2 is not even.
(C) If x is even, then x^2 is even. (D) If x is odd, then x^2 is even.

8. The contrapositive of the statement "If Chandigarh is capital of Punjab, then Chandigarh is in India" is
- (A) If Chandigarh is not in India, then Chandigarh is not the capital of Punjab.
 - (B) If Chandigarh is in India, then Chandigarh is capital of Punjab.
 - (C) If Chandigarh is not capital of Punjab, then Chandigarh is not in India.
 - (D) If Chandigarh is capital of Punjab, then Chandigarh is not in India.
9. The negation of the statement "The product of 3 and 4 is 9" is
- (A) It is false that the product of 3 and 4 is 9.
 - (B) The product of 3 and 4 is 12.
 - (C) The product of 3 and 4 is not 12.
 - (D) It is false that the product of 3 and 4 is not 9.
10. Which of the following is a statement ?
- (A) Roses are black.
 - (B) Mind your own business.
 - (C) Be punctual.
 - (D) Do not tell lies.

Very Short Answer Type Questions (1 marks)

Which of the following sentences are statement ? Give reason for your answer.

- 11. There are 35 days in a month
- 12. Sum of 5 and 7 is greater than ten
- 13. The product of -1 and 8 is 8
- 14. Sum of all interior angle of a triangle is 180°
- 15. All real numbers are complex numbers

Write the negation of the following statement.

- 16. $\sqrt{2}$ is not a complex number
- 17. The number 2 is greater than 7
- 18. Every natural number is an integer
- 19. Both the diagonal of a rectangle have the same length
- 20. $\sqrt{7}$ is a rational