Remember & Understanding Based Questions

Ques.1) Write the statements if you subtract 5 from 6 times a number, you get 7 in the form of equations:

a)2x – 14 = 44 b)5x – 7 = 2 c)6x – 5 = 7 d)3x – 11 = 34

Ques.2) Write the statements one third of a number plus 5 is 8 in the form of equations:

a) $\frac{1}{3}m + 8 = 5$ b) $\frac{1}{3}m + 5 = 8$ c) 3m + 5 = 8   d) 3m + 8 = 5

Ques.3) If 184 is divided into two parts such that one - third of one part exceeds one - seventh of the other part by 8, then the greater part is _____.
a) 110   b) 112   c) 72   d) 114

Ques.4) A _____ takes on different numerical values; its value is not fixed.
a) Variable   b) Equality   c) Term   d) Value

Ques.5) If we fail to do the same mathematical operation on both sides of a balanced equation, the balance is _____.
a) Unequal   b) Undisturbed   c) Equal   d) Disturbed

Ques.6) If we subtract the same number from both sides of a balance equation, the balance is _____.
a) Unequal   b) Undisturbed   c) Equal   d) Disturbed

Ques.7) If we add the same number to both sides of a balance equation, the balance is _____.
a) Disturbed   b) Equal   c) Increased   d) Undisturbed

Ques.8) x exceeds 3 by 7, can be represented as
a) x + 3 = 2   b) x - 7 = 3   c) x + 3 = 7   d) x - 3 = 7

Ques.9) Which of the following is not allowed in a given equation?
a) Adding the same number to both sides of the equation.
b) Substracting the same number from both sides of the equation.
c) Divinding both sides of the equation by the same number.
d) Multiplying both sides of the equation by the same non - zero number.

Ques.10) If we add the same number to both sides of a balance equation, the balance is _____.
a) Disturbed   b) Equal   c) Increased   d) Undisturbed

Ques.11) x exceeds 3 by 7, can be represented as
a) x + 3 = 2   b) x - 7 = 3   c) x + 3 = 7   d) x - 3 = 7

Ques.12) What is n in $\frac{n}{5} = \frac{7}{15}$?

a) $\frac{7}{3}$ b) 21   c) $\frac{3}{7}$ d) $\frac{75}{7}$

Ques.13) Write the equation in statement form: p + 4 = 15

Ques.14) Solve: 12p – 5 = 25

Ques.15) Solve the following equation: 4 + 5 (p – 1) = 34

Ques.16) Follow the directions and correct the given incorrect equation, written in Roman numerals:
1. Remove two of these matchsticks to make a valid equation:

    IX – VI = V

2. Move one matchstick to make the equation valid. Find two different solutions.

    VI – IV = XI

Ques.1) State True & False

1. Both sides of an equation cannot be multiplied by same non - zero number.

2. An equation in which the highest power of the variable is 1 is called linear equation.

3. The value of the variable which makes both sides of an equation equal is known as root of the equation.

4. Solving a linear equation means finding its root.

Ques.1) Fill in the Blanks

1. Any term of equality may be taken from one side to other with change in its _____.

2. On subtracting zero from y, we get _____.

3. Twice a number when decreased by 3 gives 21. The number is _____

Analytical Based Questions

Ques.1) Assertion (A): An equation is a statement in which the values of two mathematical expressions are equal.
Reason (R): $5x - 3 = 14$ is a equation.
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.

Ques.2) Assertion (A): The equation has solution zero is $x + 5 = 5$.
Reason (R): This equation is satisfied at $x = 0$ as $0 + 5 = 5$.
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.

Ques.3) Assertion (A): Expressions are formed by performing operations like addition, subtraction, multiplication and division on the variables.
Reason (R): $2m - 5$ is an expression in variable m.
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.

Ques.4) Assertion (A): When a number is transposed from one side of the equation to the other side, its sign changes.
Reason (R): An equation is a condition of equality between two mathematical expressions.
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.

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Ques.6) Assertion (A): When a number is transposed from one side of the equation to the other side, its sign changes.
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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.

Ques.7) Assertion (A): If x = 2, y = 1 is a solution of the equation 2x + 3y = k, then the value of k is 7.

Reason (R): The solution of the line will satisfy the equation of the line.

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.

Ques.8) Assertion (A): The value of the variable in an equation for which the equation is satisfied is called the solution of the equation.

Reason (R): The solution for the equation 2x - 3 = 5 is x = 3.

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.

Ques.9) Assertion (A): 10 added to a number gives 20.

Reason (R): The equation is y + 10 = 20.

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.

Ques.10) Assertion (A): Today Sunita is three times as old as Sania. The sum of their ages is 40 years.

Reason (R): The equation is x + 3x = 40.

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.

Ques.11) Match the Column

Column (A)	Column (B)
(a)The same number can be added to both sides of an equation	(p) Subtraction law
(b) The same number can be subtracted to both sides of an equation	(q) multiplication law
(c) Both sides of an equation can be multiplied by same non - zero number	(r) Division law
(d) Both sides of an equation can be divided without changing equality	(s) addition law

Ques.12) Match the Column

Column (A)	Colum (B)
(a) 7 times x7 times x	(p) x + 20 = 53
(b)The equation for the sum of x and 20 is 53	(q) variable
(c)A condition on variable is called	(r) equation
(d)Something that can vary is called	(s) 7x

Ques.13) Match the Column

Column (A)	Column (B)
(a) The sum of two consecutive whole numbers is 53. The smaller number is	(p) 44
(b) The sum of two consecutive even numbers is 86. The larger of the two is	(q) 17
(c)The sum of two consecutive odd numbers is 36. The smaller one is	(r) 36
(d)The sum of two consecutive multiples of 3 is 69. The larger number is	(s) 26

Ques.14) Match the Column

Column (A)	Column (B)
(a) $\frac{3}{4}$ of a number is 30. The number is.	(p) 90
(b) $\frac{2}{5}$ of Manu's pocket money is Rs. 80. Her Pocket money is	(q) 40
(c) $\frac{2}{3}$ of total marks is 60. The total marks are	(r) 30cm
(d) $\frac{1}{6}$ of length of a stick is 5cm. The length of stick is	(s) Rs. 200

Ques.15) The equation which cannot be solved in integers is
a) $5y - 3 = - 18$ b) $3x - 9 = 0$ c) $3z + 8 = 3 + z$ d) $9y + 8 = 4y - 7$

Ques.16) In Equation $6x + 7 = 19$, the L.H.S. is _____.
a) $=$ b) $6x + 7$ c) $-$ d) 19

Ques.17) Laxmi's father is 49 years old. He is 4 years older than three times Laxmi's age. (Take Laxmi's age to be y years.) Set up an equation.
a) $3y – 4 = 49$ b) $3y + 4 = 49$ c) $y + 4 = 49$ d) $y - 4 = 49$

Ques.18) A shopkeeper sells bananas in two types of boxes, one small and one large. A large box contains as many as 6 small boxes plus 2 loose bananas. Form an equation which gives the number of bananas in each small box, if the number of bananas in 1 large box is 50.
a) $3x + 1 = 50$ b) $x + 1 = 20$ c) $6x + 2 = 50$ d) $2x + 1 = 20$

Ques.19) Write equation for the statement: 4 more than a number is 15.

Ques.20) Write the equation for the statement: 2 subtracted from y is 8.

Ques.21) Set up an equation in the case: The teacher tells the class that the highest marks obtained by a student in her class is twice the lowest marks plus 7. The highest score is 87.

Ques.22) Check whether the value given in the bracket is a solution to the given equation or not.

$7n + 5 = 19$ (n = –2)

Ques.23) Pick out linear and simple equation in one variable from the following. Why?
1. $2x + 3y = 9$
2. $7x - 3 = 10$
3. $x^2 + 2x + 3 = 7$

Ques.24) Express the given statement as an equation:

If 1 is subtracted from a number and the difference is multiplied by $\frac{1}{2}$, the result is 7

Ques.25) A shopkeeper sells mangoes in two types of boxes, one small and one large. A large box contains as many as 8 small boxes plus 4 loose mangoes. Set up an equation which gives the number of mangoes in each small box. The number of mangoes in a large box is given to be 100.

Ques.26) Express the given statement as an equation:

If 10 is subtracted from half of a number, the result is 4

Ques.27) Check whether the value given in the bracket is a solution to the given equation or not.

$4p – 3 = 13$ (p = 1)

Ques.28) Solve the following riddle: I am a number, Tell my identity! Take me seven times over and add a fifty! To reach forty less then triple century.

Ques.29) Convert the equation in statement form: $\frac{m}{5} - 2 = 6$

**Ques.30)** In a class of 55 students, the number of girls is 5/6 times the number of boys. Find the number of boys and girls in the class.

Ques.31) People of Sundargav planted a total of 102 trees in the village garden. Some of the trees were fruit trees. The no.of non-fruit trees were two more than 3 times the no. of fruit trees. Find the no. of fruit trees planted.

Ques.32) Rajeev bought 2 apples more than Sonu. Sonu bought 3 apples less than Raghu. If Raghu bought

Ques.33) A man travelled $\frac{3}{5}$ of his journey by train, $\frac{1}{4}$ by a taxi, $\frac{1}{8}$ by bus and the remaining 2 km on foot. What is the length of his total journey?

Ques.34) In the given figure find the 3 angles.
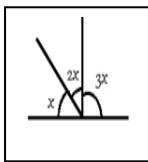
Ques.35) Solve the riddle "What is too much fun for one, enough for two, and means nothing to three?" The answer to this is hidden in the equations given below.

If 4c = 16, then c = ?

If 4e + 8 = 20, then e = ?

If 2r - 3 = 7, then r = ?

If 3t + 8 = 29, then t = ?

If 2s + 4 = 4s, then s = ?

To get the answer substitute the numbers for the letters it equals in the following:

manner: $\frac{\cdot}{2}, \frac{\cdot}{3}, \frac{\cdot}{4}, \frac{\cdot}{5}, \frac{e}{\cdot}, \frac{\cdot}{7}$

Question No. 36 to 39 are based on the given text. Read the text carefully and answer the questions:

A toy company manufactures three types of dolls A, B and C. On a particular day the production of doll B is 100 more than A and production of doll C is thrice doll A. Company manufactures total 500 dolls on that day.

Ques.36) If 'x' number of doll A are produced then production of doll B in terms x is _____.

Ques.37) How many dolls of type A are produced on that day?
a) 80   b) 50   c) 150   d) 100

Ques.38) How many dolls of type B are produced on that day?
a) 50   b) 130   c) 120   d) 180

Ques.39) How many dolls of type C are produced on that day?
a) 230   b) 300   c) 280   d) 240