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| 1  | Rational numbers are denoted by:<br>(A) $\mathcal{R}$ (B) $\mathcal{Z}$ (C) $\mathbb{Q}$ (D) $\mathbb{N}$   |
| 2  | A cow drank one sixth portion of water from a tub, the amount of water remained in the tub is:<br>(A) $\frac{1}{3}$ (B) $\frac{2}{3}$ (C) $\frac{3}{6}$ (D) $\frac{5}{6}$   |
| 3  | The number which can be written in the form of $\frac{p}{q}$ , where $q \neq 0$ , is called _____ number.<br>OR<br>If “p” and “q” are any two integers, then $\frac{p}{q}$ , where $q \neq 0$ , is a _____ number.<br>(A) Rational (B) Irrational (C) Whole (D) Natural   |
| 4  | All rational numbers have multiplicative inverse except _____.<br>(A) -1 (B) 1 (C) 0 (D) None   |
| 5  | The sum of any two rational numbers is a _____ number.<br>(A) Even (B) Real (C) Rational (D) Natural  |
| 6  | The property $a \times b = b \times a \quad \forall a, b \in \mathbb{Q}$ is called:<br>(A) Commutative w.r.t. “+” (B) Commutative w.r.t. “ $\times$ ”<br>(C) Associative w.r.t. “+” (D) Associative w.r.t. “ $\times$ ”   |
| 7  | The property $a + b = b + a \quad \forall a, b \in \mathbb{Q}$ is called:<br>(A) Commutative w.r.t. “+” (B) Commutative w.r.t. “ $\times$ ”<br>(C) Associative w.r.t. “+” (D) Associative w.r.t. “ $\times$ ”   |
| 8  | The additive inverse of 119 is:<br>(A) 119 (B) -119 (C) $\frac{1}{119}$ (D) 0   |
| 9  | The multiplicative inverse of $-\frac{3}{4}$ is:<br>(A) $\frac{3}{4}$ (B) $-\frac{4}{3}$ (C) $\frac{4}{3}$ (D) $-\frac{3}{4}$   |
| 10 | If $3x < -3$ then which of the following inequality is true.<br>(A) $x < -1$ (B) $x > -1$ (C) $x < 1$ (D) $x > 1$   |
| 11 | $-\frac{3}{7} + \underline{\hspace{2cm}} = -1$<br>(A) $-\frac{3}{7}$ (B) $-\frac{7}{3}$ (C) $-\frac{4}{7}$ (D) $\frac{3}{7}$  |
| 12 | The property $a \times (b \times c) = (a \times b) \times c \quad \forall a, b, c \in \mathbb{Q}$ is called:<br>OR<br>$\forall x, y, z \in \mathbb{Q}, x \times (y \times z) = (x \times y) \times z$ , the property of rational numbers used is:<br>(A) Commutative w.r.t. “+” (B) Commutative w.r.t. “ $\times$ ”<br>(C) Associative w.r.t. “+” (D) Associative w.r.t. “ $\times$ ” |
| 13 | The property $a + (b + c) = (a + b) + c \quad \forall a, b, c \in \mathbb{Q}$ is called:<br>(A) Commutative w.r.t. “+” (B) Commutative w.r.t. “ $\times$ ”<br>(C) Associative w.r.t. “+” (D) Associative w.r.t. “ $\times$ ”  |
| 14 | The additive identity of rational numbers is:<br>(A) -1 (B) 1 (C) 0 (D) None  |
| 15 | The multiplicative identity of rational numbers is:<br>(A) -1 (B) 1 (C) 0 (D) None  |
| 16 | The multiplicative inverse of 119 is:<br>(A) 119 (B) -119 (C) $\frac{1}{119}$ (D) 0   |
| 17 | The additive inverse of $-\frac{3}{4}$ is:<br>(A) $\frac{3}{4}$ (B) $-\frac{4}{3}$ (C) $\frac{4}{3}$ (D) $-\frac{3}{4}$   |

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| 18 | "1" is the identity element w.r.t. _____.<br>(A) Addition (B) Multiplication (C) Subtraction (D) Division  |
| 19 | "0" is the identity element w.r.t. _____.<br>(A) Addition (B) Multiplication (C) Subtraction (D) Division  |
| 20 | If $x > y$ and $y > x$ then<br>(A) $x=y$ (B) $x \neq y$ (C) $x+y$ (D) None   |
| 21 | If the additive inverse of "b" is "a" then:<br>(A) $ab=1$ (B) $a=b$ (C) $a+b=0$ (D) $a-b=0$  |
| 22 | If the multiplicative inverse of $\frac{a}{b}$ is $\frac{c}{d}$ then:<br>(A) $\frac{a}{b} + \frac{c}{d} = 0$ (B) $\frac{a}{b} - \frac{c}{d} = 0$ (C) $\frac{ac}{bd} = 1$ (D) $ad=bc$   |
| 23 | If $x < y$ then which of the following will be true.<br>(A) $-x < -y$ (B) $y < x$ (C) $\frac{1}{x} < \frac{1}{y}$ (D) $-\frac{1}{x} < -\frac{1}{y}$  |
| 24 | If $-x < -y$ then which of the following will be true.<br>(A) $-y > -x$ (B) $x > y$ (C) $\frac{1}{x} < \frac{1}{y}$ (D) $-\frac{1}{x} < -\frac{1}{y}$  |
| 25 | If $a < b$ then $\forall c \in \mathbb{Q}$ and $c < 0$ which of the following is true.<br>OR<br>$\forall a, b, c \in \mathbb{Q}$ , if $a < b$ and $c < 0$ , then which of the following statements is true.<br>(A) $ac < bc$ (B) $ac > bc$ (C) $\frac{a}{c} < \frac{b}{c}$ (D) $\frac{c}{a} > \frac{c}{b}$ |
| 26 | The multiplicative inverse of $x^0$ is:<br>(A) 1 (B) -1 (C) $\frac{1}{x}$ (D) x  |
| 27 | The multiplicative inverse of $\frac{x^0}{y^0}$ is:<br>(A) 1 (B) -1 (C) $\frac{y}{x}$ (D) $-\frac{y}{x}$   |
| 28 | The property $\forall a, b \in \mathbb{Q} \Rightarrow a+b \in \mathbb{Q}$ is called:<br>(A) Closure property w.r.t. "+" (B) Closure property w.r.t. "x"<br>(C) Distributive property of "x" over "+" (D) Distributive property of "x" over "-"   |
| 29 | The property $\forall a, b \in \mathbb{Q} \Rightarrow a \times b \in \mathbb{Q}$ is called:<br>(A) Closure property w.r.t. "+" (B) Closure property w.r.t. "x"<br>(C) Distributive property of "x" over "+" (D) Distributive property of "x" over "-"  |
| 30 | The product of any two rational numbers is a _____ number.<br>(A) Even (B) Real (C) Rational (D) Natural   |
| 31 | The symbol _____ stands for "implies that".<br>(A) $\forall$ (B) $\Rightarrow$ (C) $\in$ (D) $\neq$  |
| 32 | The property $\forall a, b, c \in \mathbb{Q} \Rightarrow a \times (b+c) = (a \times b) + (a \times c)$ is called:<br>(A) Closure property w.r.t. "+" (B) Closure property w.r.t. "x"<br>(C) Distributive property of "x" over "+" (D) Distributive property of "x" over "-"                                |
| 33 | The property $\forall a, b, c \in \mathbb{Q} \Rightarrow a \times (b-c) = (a \times b) - (a \times c)$ is called:<br>(A) Closure property w.r.t. "+" (B) Closure property w.r.t. "x"<br>(C) Distributive property of "x" over "+" (D) Distributive property of "x" over "-"                                |
| 34 | The symbol _____ stands for "for all".<br>(A) $\forall$ (B) $\Rightarrow$ (C) $\in$ (D) $\neq$   |
| 35 | $\forall x \in \mathbb{Q} \Rightarrow x=x$ then it is called _____ property.<br>(A) Reflexive (B) Symmetric (C) Transitive (D) Trichotomy  |
| 36 | $\forall x, y \in \mathbb{Q}$ then $x=y \Rightarrow y=x$ then it is called _____ property.<br>(A) Reflexive (B) Symmetric (C) Transitive (D) Trichotomy  |

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| 37 | $\forall x, y, z \in \mathbb{Q}$ then $x=y$ and $y=z \Rightarrow x=z$ then it is called _____ property.<br>(A) Reflexive (B) Symmetric (C) Transitive (D) Trichotomy                                 |
| 38 | $\forall x, y \in \mathbb{Q}$ then either $x=y$ or $x<y$ or $x>y$ then it is called _____ property.<br>(A) Reflexive (B) Symmetric (C) Transitive (D) Trichotomy                                     |
| 39 | If $a \leq b$ and $b \leq a$ then which of them is correct.<br>(A) $a=b$ (B) $a \neq b$ (C) $a < b$ (D) $b < a$  |
| 40 | If $x > y$ then which of the following will be true.<br>(A) $-x > -y$ (B) $y > x$ (C) $\frac{1}{x} < \frac{1}{y}$ (D) $-\frac{1}{x} < -\frac{1}{y}$  |
| 41 | Which is greater of the two rational numbers $\frac{-7}{11}$ and $\frac{5}{-8}$ .<br>(A) $\frac{-7}{11}$ (B) $\frac{5}{-8}$ (C) Both are same (D) None   |
| 42 | Which is greater of the two rational numbers $\frac{3}{13}$ and $\frac{5}{21}$ .<br>(A) $\frac{3}{13}$ (B) $\frac{5}{21}$ (C) Both are same (D) None   |
| 43 | If $-5x > -15$ then which of the following inequality is true.<br>(A) $x < -3$ (B) $x > -3$ (C) $x < 3$ (D) $x > 3$  |
| 44 | Which is greater of the two rational numbers $-\frac{3}{7}$ and $\frac{2}{7}$ .<br>(A) $-\frac{3}{7}$ (B) $\frac{2}{7}$ (C) Both are same (D) None   |
| 45 | Which is greater of the two rational numbers $\frac{3}{7}$ and $\frac{6}{21}$ .<br>(A) $-\frac{3}{7}$ (B) $\frac{2}{7}$ (C) Both are same (D) None   |
| 46 | If $3x < 9$ then which of the following inequality is true.<br>(A) $x < -3$ (B) $x > -3$ (C) $x < 3$ (D) $x > 3$   |
| 47 | If $x < 4$ then which of the following inequality is true.<br>(A) $-x < -4$ (B) $-x > -4$ (C) $-x < 4$ (D) $-x > 4$  |
| 48 | If $-x > 6$ then which of the following inequality is true.<br>(A) $x < -6$ (B) $x > -6$ (C) $x < 6$ (D) $x > 6$   |
| 49 | If $-5x < -15$ then which of the following inequality is true.<br>(A) $x < -3$ (B) $x > -3$ (C) $x < 3$ (D) $x > 3$  |
| 50 | If $-5x > -15$ then $x < 3$ . Name the property.<br>(A) Cancellation property w.r.t. " $\times$ " (B) Cancellation property w.r.t. "+"<br>(C) Additive property (D) Transitive property              |
| 51 | If $-x > 6$ then $x < -6$ . Name the property.<br>(A) Cancellation property w.r.t. " $\times$ " (B) Cancellation property w.r.t. "+"<br>(C) Additive property (D) Transitive property                |
| 52 | Property of inequality used in $3x < 9 \Rightarrow x < 3$ is:<br>(A) Division (B) Multiplication (C) Additive (D) Transitive   |
| 53 | If $2 < a < 3$ and $b < 2$ then<br>(A) $a > b$ (B) $a < b$ (C) $a = b$ (D) $a = 2$   |
| 54 | If $a > b$ and $b > 5 \Rightarrow a > 5$ . Name the property.<br>(A) Cancellation property w.r.t. " $\times$ " (B) Cancellation property w.r.t. "+"<br>(C) Additive property (D) Transitive property |
| 55 | $7\frac{2}{3}$ is a _____ number.<br>(A) Rational (B) Irrational (C) Real (D) Whole  |
| 56 | "0" is a _____ number.<br>(A) Rational (B) Irrational (C) Real (D) Whole   |
| 57 | Which of the following number is the reciprocal of itself?   |

|    | (A) 0   | (B) 1 | (C) x | (D) None |
|----|---|-------|-------|----------|
| 58 | All integers are _____ number.<br>(A) Rational (B) Irrational (C) Even (D) Whole  |       |       |          |
| 59 | If $3x > 9 \Rightarrow x > 3$ then which property of inequality is used.<br>(A) Additive (B) Multiplicative (C) Distributive (D) Cancellation   |       |       |          |
| 60 | State the property used in $\frac{3}{4} + \frac{5}{7} = \frac{5}{7} + \frac{3}{4}$<br>(A) Commutative w.r.t. "+" (B) Distributive property of "×" over "-"<br>(C) Associative w.r.t. "+" (D) Distributive property of "×" over "+"  |       |       |          |
| 61 | State the property used in $-\frac{4}{5} + \left(\frac{3}{4} + \frac{2}{3}\right) = \left(-\frac{4}{5} + \frac{3}{4}\right) + \frac{2}{3}$<br>(A) Commutative w.r.t. "+" (B) Distributive property of "×" over "-"<br>(C) Associative w.r.t. "+" (D) Distributive property of "×" over "+"        |       |       |          |
| 62 | State the property used in $\frac{5}{7} \left(\frac{1}{3} + \frac{7}{9}\right) = \frac{5}{7} \times \frac{1}{3} + \frac{5}{7} \times \frac{7}{9}$<br>(A) Commutative w.r.t. "+" (B) Distributive property of "×" over "-"<br>(C) Associative w.r.t. "+" (D) Distributive property of "×" over "+" |       |       |          |
| 63 | State the property used in $\frac{5}{6} \left(\frac{2}{3} - \frac{5}{2}\right) = \frac{5}{6} \times \frac{2}{3} - \frac{5}{6} \times \frac{5}{2}$<br>(A) Commutative w.r.t. "+" (B) Distributive property of "×" over "-"<br>(C) Associative w.r.t. "+" (D) Distributive property of "×" over "+" |       |       |          |
| 64 | Symbol of inequality is:<br>(A) < (B) > (C) Both < and > (D) None   |       |       |          |
| 65 | The multiplicative inverse of $-\frac{5}{7}$ is:<br>(A) $\frac{5}{7}$ (B) $-\frac{5}{7}$ (C) $\frac{7}{5}$ (D) $-\frac{7}{5}$   |       |       |          |
| 66 | If $(-99) + (99) = 0$ then property of equality used is:<br>OR<br>If $(-101) + (101) = 0$ then property of equality used is:<br>(A) Reflexive (B) Symmetric (C) Transitive (D) Additive Inverse   |       |       |          |
| 67 | The property used in the given case is $(4+2)+7 = 4+(2+7)$ :<br>(A) Commutative (B) Closure (C) Associative (D) Distributive  |       |       |          |
| 68 | The sentence "The product of any two rational numbers is also a rational number" indicate towards _____ property.<br>(A) Commutative (B) Closure (C) Associative (D) Distributive   |       |       |          |
| 69 | $\left(7\frac{1}{5} + 1\frac{4}{5}\right) \div \frac{2}{5}$ is equal to:<br>(A) $\frac{18}{5}$ (B) $\frac{18}{10}$ (C) $\frac{45}{2}$ (D) $\frac{45}{4}$  |       |       |          |
| 70 | $-2 \times (5 - 3)$ is equal to:<br>(A) $-2 \times 3 - 2 \times 5$ (B) $-2 \times 5 - 2 \times 3$ (C) $-2 \times 3 + 2 \times 5$ (D) $-2 \times 5 + 2 \times 3$   |       |       |          |
| 71 | If $5 < a$ , $b > a$ , then the correct relation is:<br>(A) $b < a$ (B) $b > 5$ (C) $5 > b$ (D) $5 > a$   |       |       |          |
| 72 | The ascending order of the rational numbers $\frac{2}{7}, \frac{5}{3}, \frac{3}{5}$ is:<br>(A) $\frac{5}{3}, \frac{2}{7}, \frac{3}{5}$ (B) $\frac{5}{3}, \frac{3}{5}, \frac{2}{7}$ (C) $\frac{2}{7}, \frac{5}{3}, \frac{3}{5}$ (D) $\frac{2}{7}, \frac{3}{5}, \frac{5}{3}$                        |       |       |          |
| 73 | Approximate value of 4.236... correct up to 2 decimal places is:<br>(A) 4.23 (B) 4.24 (C) 4.22 (D) 4.25   |       |       |          |
| 74 | Product of 2.25 and 1.3 is:<br>(A) 4.000 (B) 2.925 (C) 3.550 (D) 3.725  |       |       |          |
| 75 | If $4, 8 \in \mathbb{Q}$ and $4 < 8$ then $-5 < 0 \in \mathbb{Q}$ such that $4(-5) > 8(-5)$ property used is:   |       |       |          |

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|    | (A) Additive (B) Multiplicative (C) Transitive (D) Trichotomy   |
| 76 | The multiplicative inverse of $\frac{3}{4}$ is:<br>(A) $\frac{3}{4}$ (B) $-\frac{4}{3}$ (C) $\frac{4}{3}$ (D) $-\frac{3}{4}$  |
| 77 | "The commutative property w.r.t. multiplication" of rational numbers is:<br>(A) $\frac{7}{8} \times \frac{9}{11} = \frac{9}{11} \times \frac{7}{8}$ (B) $\frac{7}{8} + \frac{9}{11} = \frac{9}{11} + \frac{7}{8}$ (C) $\frac{7}{8} \times \frac{9}{11} = \frac{7}{8} \times \frac{9}{11}$ (D) $\frac{8}{7} \times \frac{11}{9} = \frac{8}{7} \times \frac{11}{9}$ |
| 78 | Set $\{0, 1, -1\}$ holds closure law w.r.t. _____.<br>(A) Addition (B) Multiplication (C) Subtraction (D) Division  |
| 79 | The additive inverse of $\frac{4}{9}$ is:<br>(A) $\frac{4}{9}$ (B) $-\frac{4}{9}$ (C) $\frac{9}{4}$ (D) $-\frac{9}{4}$  |
| 80 | By using reflexive property of numbers, $\frac{3}{7}$ is equal to:<br>(A) $\frac{3}{7}$ (B) $-\frac{3}{7}$ (C) $\frac{7}{3}$ (D) $-\frac{7}{3}$   |
| 81 | If $x, y \in \mathbb{Q}$ then according to the trichotomy property, which one correct?<br>(A) $x=y$ or $x<y$ or $x>y$ (B) $1$ or $\frac{y}{x}$ or $\frac{x}{y}$ (C) $x+y$ or $\frac{x}{y}$ or $x>y$ (D) $x+y$ or $\frac{x}{y}$ or $x-y$   |
| 82 | If $-2x > -3x$ then value of "x" will be _____ number.<br>(A) Negative (B) Positive (C) Negative And Positive (D) Zero  |
| 83 | Irrational number is:<br>(A) $\sqrt{25}$ (B) $\sqrt{2}$ (C) $\sqrt{9}$ (D) $\sqrt{16}$  |

## CHAPTER NO.2

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| C  | D  | A  | C  | C  | B  | A  | B  | C  | A  | C  | D  | C  | C  | B  | C  | C  | A  |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| A  | A  | C  | C  | D  | B  | B  | A  | A  | C  | B  | C  | B  | C  | D  | A  | A  | A  |
| 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 |
| C  | D  | A  | C  | B  | B  | C  | B  | A  | C  | B  | A  | D  | A  | A  | B  | A  | D  |
| 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| A  | A  | B  | A  | A  | A  | C  | D  | B  | C  | C  | D  | C  | B  | C  | D  | B  | D  |
| 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| B  | B  | B  | C  | A  | B  | B  | A  | A  | C  | D  |    |    |    |    |    |    |    |