Class7 Exponent Test Paper -1

Q.1. $\{(1/3)^{-3} - (1/2)^{-3}\} / \{(1/4)^{-3} \times 6 \times 8^{-1}\} + (6^{-1} \times 8^{-1})$ [Ans: 5/12]

Q.2. Find x if $5^{2+x} + 1 = 126$

Q.3. by what number should $(-3/8)^{-2}$ be divided to get 21/ -25

Q. 4. $(9^n \times 3^2 \times 3^{-n/2} - 27^n) / (3^{3m} \times 2^3) = 1/27$ then prove that m - n =1 ?

Q. 5. By what no should $[5/3]^{-2}$ be multiplied so that the product may be $\{7/3\}^{-1}$ [Ans: 25/21]

Q. 6. if $x = (3/2)^2 \times (2/3)^{-4}$. find the value of x^{-2}

Q. 7. if $x = \{4/5\}^{-2} / \{1/4\}^2$ find x^{-1}

Q. 8. By what number should 5^{-1} be multiplied so that the product may be equal to $(-7)^{-1}$

Q. 9. By what no should $\{1/2\}^{-1}$ be multiplied so that the product may be equal to $[-1/7]^{-1}$

Q. 10. Find the value of x

(a) $[1/4]^{-4} \times [1/4]^{-8} = [1/4]^{-4x}$ (b) $[-1/2]^{-19} \div [-1/2]^8 = [-1/2]^{-2x=1}$ (c) $[3/2]^{-3} \times [3/2]^5 = [3/2]^{2x+1}$

(d) $[2/5]^{-3} \times [2/5]^{15} = [2/5]^{2+3x}$ (d) $[5/4]^{-x} \div [5/4]^{-4} = [5/4]^5$ (e) $[8/3]^{2x+1} \times [8/3]^5 = [8/3]^{x+2}$

Q.11. Simplify   (a) $\{(1/2)^{-1} \times (-4)^{-1}\}^{-1}$ (b) $[\{(-1/4)^2\}]^{-1}$ (c) $\{[2/3]^2\}^3 \times (1/3) \times 3^{-1} \times 6^{-1}$

Q. 12. By what no should $[-15]^{-1}$ be divided sp that the quotient may be equal to $\{-5\}^{-1}$ [Ans: 1/3]

Q. 13. Simplify:- $[2/3]^2 \times [-3/5]^2 \times [7/2]^2$

Q.14. What is the reciprocal of $[(a^m)^n]$

Q.15. If $4^x - 4^{x-1} = 24$ then find the value of $(2x)^X$.   Ans: $25\sqrt{5}$

Q.16. If $5^{2x+1} \div 25 = 125$ Find x.   (Ans: 2)

Q.17. Find x if $(5/4)^{-x} \div (5/4)^{-4} = (5/4)^5$

Q.18. If $x^{-1} + y^{-1} = 2^{-1}$ and x +y =10 , find xy . Ans: 20

Q. 19. Find m if(i) $1/8^3 \div 1/8^6 = 8^m$ (ii)   find x if = $(2/3)^5 \times (2/3)^{12} = (2/3)^{3x-2}$

Q.20. (i) $3^{12} \times (2^x)^2 = 612$, then find x   [x = 6]   (ii) Find the value of x : $(1/3)^5 \times (1/3)^{-4} = (1/3)^{2x+3}$

Q.21. $(-2)^{m+1} \times (-2)^{5+m} = (-2)^8$ Find m

Q.22. (i) if $5^{2x+1} \div 25 = 125$, the value of x   (ii) If $(2^{3x-1} + 10) \div 7 = 6$ then find x ?

Q.23. By what number should $(8/3)^{-1}$ multiplied to get quotient $(4/3)^{-2}$?

Q.24. Simplify $\{(x^{a+b})^2 \times (x^{b+c})^2 \times (x^{c+a})^2\} \div \{(x^a \cdot x^b \cdot x^c)^3\}$ [Ans: $\frac{1}{x^{a+b+c}}$]

Q. 25. Simplify: (i) $[\{(-1/5)^{-2}\}^2]^{-1}$ [Ans: 1/625]   (ii) $\{(1/3)^{-2} - (1/2)^{-3}\} / (1/4)^{-2}$ [Ans: 1/16]

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