THE WISDOM ACADEMY

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| Class: 9th | Test#02: Math | Total Marks: 40 | Chap#02 |

Student Name: _____   Roll No: _____

Q: 01 Encircle the correct option: (1x10)

1	Scientific notation of $\frac{1}{0.0001}$ is:	a) 0.001	b) 10000	c) 1×10^4	d) 1×10^{-4}
2	$\log_2 64 = 3$ in exponential form is:	a) $3^4 = 64$	b) $4^3 = 64$	c) $64^3 = 4$	d) $64^4 = 3$
3	$\log_2 x = 6$, then x=?	a) 26	b) 36	c) 56	d) 64
4	If $4^x = \frac{1}{16}$ then x =?	a) 2	b) -2	c) -4	d) 4
5	The general form of logarithm	a) $\log_b = xy$	b) $\log_x y = b$	c) $\log_{xy} = b$	d) $\log_b (x) = y$
6	The value of $\log(1)$ is:	a) 1	b) 10	c) 0	d) undefined
7	Which one of the following is equivalent to $e^x = y$	a) $\log(x) = y$	b) $\log(y) = x$	c) $\ln(x) = y$	d) $\ln(x) = y$
8	If $\log 2 = 0.3010$, then $\log 200$ is:	a) 1.3010	b) 0.6010	c) 2.3010	d) 2.6010
9	$\log(0) =$	a) positive	b) negative	c) zero	d) undefined
10	The base of common logarithm is:	a) 2	b) 10	c) 5	d) e

Q: 02 Write the Answers of these Short Questions: (2x10)

1) Express in ordinary notation. $\frac{3.5\times10^{-4}}{7.88\times10^3}$

2) Express in exponential form: (i) $\log_7 7 = 1$ (ii) $\log_{23} 1 = 0$

3) Evaluate $\log_2 \frac{1}{128}$

4) Find the value of x in each case: (i) $\log_2 1024 = x$ (ii) $\log_4 x = \frac{3}{2}$

5) What is reference position?

6) Why we use logarithm?

7) Express the following number in scientific notation: (i) 0.33×10^3 (ii) 48900

8) Find the logarithm of following numbers: (i) 0.0876   (ii) 1.982

9) Express each of the following logarithmic form: (i) $p = q^r$ (ii) $(32)^{\frac{-1}{5}} = \frac{1}{2}$

10) Differentiate natural logarithm common logrithm?

Q: 03 Attempt these long Questions: (5x2)

A) Find the value of x in the following by using Logarithmic table:

    (i)   log x = −3.1234   (ii)   log x = 0.0044

B) Find the value of x: (i) $\log_{625} 5 = \frac{1}{4}x$ (ii) $\log_{64} 8 = \frac{x}{2}$ (iii) $\log_9 x = 0.5$