DPP LOGARITHM BACKLOG /REVISION COURSE

STRAIGHT OBJECTIVE TYPE

1. The value of $3^{2\log_3 4}$

(A) 9/4 (B) 1/4

(C) 16 (D) 81

2. If $\frac{\log 125}{\log 25} = x$, then the value of x is

(A) 5 (B) 3/2

(C) 100 (D) 10

3. If $a^x = b^y$; then

(A) $y\log_a m = x\log_b m$ (B) $x\log_a m = y\log_b m$

(C) $a\log_y m = b\log_x m$ (D) none of these

4. Given $\log_{10} 2 = a$ and $\log_{10} 5 = b$, then the value of is $\log_8 \sqrt{125}$:

(A) $\frac{a}{2b}$ (B) $\frac{b}{2a}$

(C) $\frac{2a}{b}$. (D) none of these

5. The equation has $\frac{\log_{10}(2x-5)}{\log_{10}(x^2-8)} = 0.5$

(A) No solution (B) one solution

(C) two solutions. (D) none of these

6. If $\log_{30}3$=c, $\log_{30}5$ = d then the value of $\log_{30}8$.

(A) 3(1 – c – d) (B) 3(1 + c + d)

(C) 3(1 + c – d) (D) none of these.

7. $7\log\left(\frac{16}{15}\right)+5\log\left(\frac{25}{24}\right)+3\log\left(\frac{81}{80}\right)$ is equal to

(A) 0 (B) 1

(C) log 2 (D) log 3

8. The value of $\frac{1}{\log_2 n}+\frac{1}{\log_3 n}+...+\frac{1}{\log_{43} n}$ is

(A) $\frac{1}{\log_{43!} n}$ (B) $\frac{1}{\log_{43} n}$

(C) $\frac{1}{\log_{42} n}$ (D) $\frac{1}{\log_{43}(n!)}$

9. $\log_{10} \tan1° + \log_{10}\tan2° + ... + \log_{10} \tan89° =$
(A) 0 (B) 1
(C) 27 (D) 81

10. If $\log_{12}27 = a$ then $\log_6 16 =$
(A) $2\left(\frac{3-a}{3+a}\right)$ (B) $3.\left(\frac{3-a}{3+a}\right)$
(C) $4\left(\frac{3-a}{3+a}\right)$ (D) $5\left(\frac{3-a}{3+a}\right)$

MULTIPLE CORRECT ANSWER TYPE

11. If $\log_3 x + \log_3 y = 2 + \log_3 2$ and $\log_3 (x + y) = 2$ then
(A) x = 1 (B) y = 1
(C) x = 3 (D) y = 6

12. The value of $\log_5 \log_2 \log_3 \log_2 512$ is
(A) 0 (B) $\log_5 1$
(C) 5 (D) 3.

13. The value of $\log_b a. \log_c b \log_d c \log_a d$ is
(A 0 (B) logabcd
(C) log 1 (D) 1

MATRIX & MATCHING

14.

	Column I		**Column II**
(A)	$\frac{\log 1000}{\log 100}$ is equal to	(p)	3/2
(B)	$\frac{\log 125}{\log 25}$ is equal to	(q)	- 3/2
(C)	$\log_{1/3} 243$ is equal to	(r)	7/6
(D)	$\log_{64} 128$ is equal to	(s)	- 5

15.

	Column I		**Column II**
(A)	The solution of the equation $2^{3/\log_3 x} = \frac{1}{64}$ is	(p)	2, 3
(B)	The solution set of the equation $\log_2(3 - x) + \log_2 (1 - x) = 3$ is	(q)	4
(C)	The solution of $\log_7 \log_5 \left(\sqrt{x+5} + \sqrt{x}\right) = 0$ is	(r)	-1

(D) If $7^{\log_7(x^2-4x+5)} = x - 1$, then x may have values (s) $\frac{1}{\sqrt{3}}$

INTEGER ANSWERS TYPE

16. The value of $3^{2\log_9 3}$.

17. The value of $\log_2(\log_2(\log_2(\log_3 81)))$.

18. If $a = \log_{12} 18$, $b = \log_{24} 54$ then the value of $ab + 5(a - b)$ is

19. The value of $\frac{\log_2 24}{\log_{96} 2} - \frac{\log_2 192}{\log_{12} 2}$ is

20. $\log_x y \log_y z \log_z x$ is equal to

COMPREHENSION TYPE

$\log_a mn = \log_a m + \log_a n$

$\log_a \frac{m}{n} = \log_a m - \log_a n$

$\log_a m^n = n\log a^m$

21. $\log_{10} 100$

22. $\log_{10} 1000$

23. $\frac{\log 10000}{\log 10}$

24. $\frac{\log 25}{\log 5}$

Solution

1. (C)
2. (B)
3. (A)
4. (B)
5. (B)
6. (A)
7. (C)
8. (A)

9. (A)
10. (C)
11. (C, D)
12. (A, B)
13. (A, C)
14. (A-p), (B-p), (C-s), (D-r)
15. (A-s), (B-r), (C-q), (D-p)
16. 3
17. 0
19. 2
20. 1
21. 2
22. 3
23. 4
24. 2