BHARATH COACHING CENTRE

8 CBSE	Maths	Total: 40

Exponents and Powers   Time:1.30hrs

SECTION – A $8 \times 1 = 8$

1. Evaluate $(-3)^{-4}$.

2. find the value of $(2^0 + 3^{-1}) \times 3^2$.

3. Find the value of $\left(\frac{2}{5}\right)^{-3}$.

4. Write 3500000 in standard form.

5. Write 6.912×10^8 in usual form.

6. Write 0.00000083 in standard form.

7. Write 0.000367×10^4 in usual form.

8. Evaluate $\left[\left(\frac{-3}{2}\right)^2\right]^{-3}$.

SECTION – B $2 \times 6 = 12$

9. Expand $\left(\frac{a}{b} \times \frac{c}{d}\right)^n$.

10. Simplify $(3^{-1} + 6^{-1}) \div \left(\frac{3}{4}\right)^{-1}$.

11. Evaluate $\left(\frac{1}{2}\right)^{-2} + \left(\frac{1}{3}\right)^{-2} + \left(\frac{1}{4}\right)^{-2}$.

12. Express in usual form $(i)\, 1.596 \times 10^{-6}$ $(ii)\, 4.129 \times 10^{-3}$

13. Express in standard form $(i)\, 0.0000000534$ $(ii)\, 168000000$

14. The speed of light is 300000000 m\s and height of Mount Everest is 8848 m. Express both of them in standard form.

SECTION – C $3 \times 4 = 12$

15. Find the value of x for which $\left(\frac{7}{12}\right)^{-4} \times \left(\frac{7}{12}\right)^{3x} = \left(\frac{7}{12}\right)^5$.

16. If $(2^{3x-1} + 10) \div 7 = 6$, find x.

17. By what number should $\left(\frac{-2}{3}\right)^{-3}$ be divided so that the quotient is $\left(\frac{4}{9}\right)^{-2}$.

18. Find the value of $(3^{-1} + 6^{-1}) \div 5^{-1}$.

19. In a stack there are 4 books each of thickness 24mm and 6 paper sheets each of thickness 0.015 mm. what is the total thickness of the stack in standard form?

20. Evaluate (i) $\left[\left(\frac{1}{3}\right)^{-3} - \left(\frac{1}{2}\right)^{-3}\right] \div \left(\frac{1}{4}\right)^{-3}$

(ii) $\left\{\left(\frac{4}{3}\right)^{-1} - \left(\frac{1}{4}\right)^{-1}\right\}^{-1}$