Target PMT
EXCLUSIVELY FOR MEDICAL ENTRANCE

Corporate Office: A-1/169, Main Najafgarh Road
Janakpuri New Delhi-110058, Phone: 011-41024601-05
Visit us at: https://targetpmt.in
E-mail: info@targetpmt.in

CLASS ASSIGNMENT

(FOUNDATION COURSE)

Assignment No. : 03 **Date : 19/04/2022** **Batch : B-1**

TOPICS COVERED

MATHS

Number System

1. Simplify : (a) $\dfrac{(25)^{3/2}\times(243)^{3/5}}{(16)^{5/4}\times(8)^{4/3}}$ (b) $(\sqrt{4})^{-7}(\sqrt{2})^{-5}$

2. Prove that $\dfrac{(0.6)^0-(0.1)^{-1}}{\left(\frac{3}{8}\right)^{-1}\left(\frac{3}{2}\right)^3+\left(-\frac{1}{3}\right)^{-1}}=-\dfrac{3}{2}$

3. Solve : $\dfrac{4+\sqrt{5}}{4-\sqrt{5}}+\dfrac{4-\sqrt{5}}{4+\sqrt{5}}$

4. If $a=\dfrac{2-\sqrt{5}}{2+\sqrt{5}}$ and $b=\dfrac{2+\sqrt{5}}{2-\sqrt{5}}$ find a^2-b^2.

5. Show that $\dfrac{\left(x^{a+b}\right)^2\left(x^{b+c}\right)^2\left(x^{c+a}\right)^2}{\left(x^a.x^b.x^c\right)^4}=1$

6. If $x=3-2\sqrt{2}$ find $x^2+\dfrac{1}{x^2}$.

7. If x, y, z are positive real numbers show that $\sqrt{x^{-1}y}.\sqrt{y^{-1}z}.\sqrt{z^{-1}x}=1$.

8. If both a & b are rational number, find the value of a & b.

   (i) $\dfrac{5+\sqrt{3}}{7-4\sqrt{3}}=47a+\sqrt{3}b$ (ii) $\dfrac{\sqrt{2}+\sqrt{3}}{3\sqrt{2}-2\sqrt{3}}=a-b\sqrt{6}$.

9. If $x=2+\sqrt{3}$ find the value of $x+\dfrac{1}{x}$.

10. Simplify : $\left(\dfrac{5^{-1}\times7^2}{5^2\times7^{-4}}\right)^{7/2}\times\left(\dfrac{5^{-2}\times7^3}{5^3\times7^{-5}}\right)^{-5/2}$

❑ ❑ ❑