

## GATE Instrumentation Engineering Memory Based

Q1- 5, 6, 15, - 89, 170,291

Q2- 3-4 LOM running at 2970 rpm. T-speed L from  $N_s$  to 95%  $N_s$ . Find r when TL is double

Q3- In Metal detectors what is the process happening?

A) Change in Reluctance

B) Chage in Ele field

C) Change in Capacitance

Q4- The prob of missing a class is 0.1. If the total Classes are 10 then find Prob that the student will not miss more than one class.

Q5- 2 wattmeter method

Total power = 90 kw

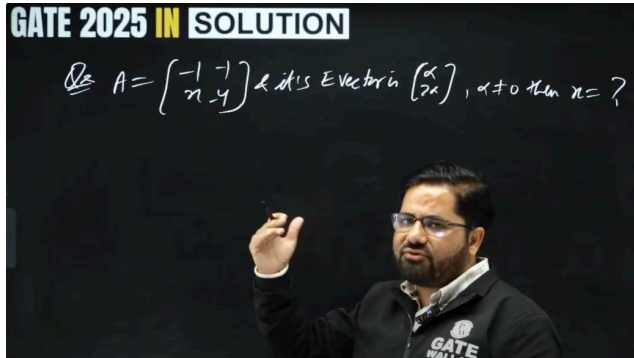
P.F =  $\sqrt{3}/2$

W1=?

W2=?

**GATE 2025 IN SOLUTION**

Q6-  $A = \begin{pmatrix} -1 & -1 \\ x & -y \end{pmatrix}$  & it's Eigen in  $\begin{pmatrix} x \\ \alpha x \end{pmatrix}$ ,  $\alpha \neq 0$  then  $x = ?$

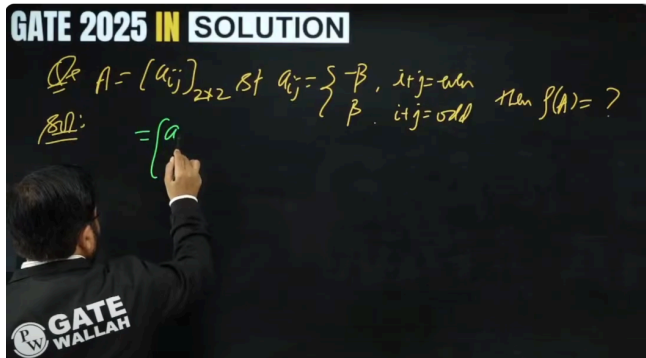


Q6-

**GATE 2025 IN SOLUTION**

Q7-  $A = [a_{ij}]_{2 \times 2}$  st  $a_{ij} = \begin{cases} \beta, & i+j = \text{even} \\ \beta, & i+j = \text{odd} \end{cases}$  then  $f(A) = ?$

Sol:  $= \beta a$

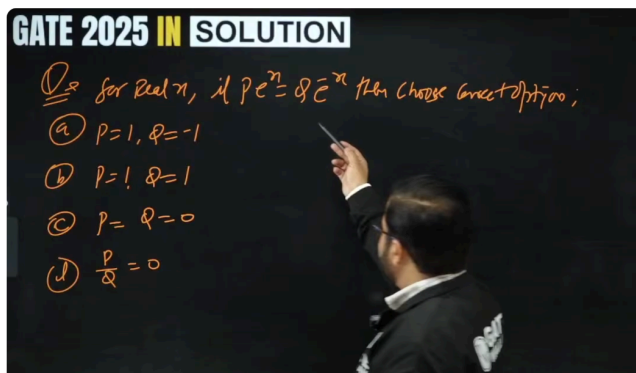


Q7-

**GATE 2025 IN SOLUTION**

Q8- for Real  $x$ , if  $p e^x = q e^{-x}$  then Choose correct option;

- (a)  $p=1, q=-1$
- (b)  $p=1, q=1$
- (c)  $p=q=0$
- (d)  $\frac{p}{q} = 0$



Q8-