**Designing High Pass Filter**

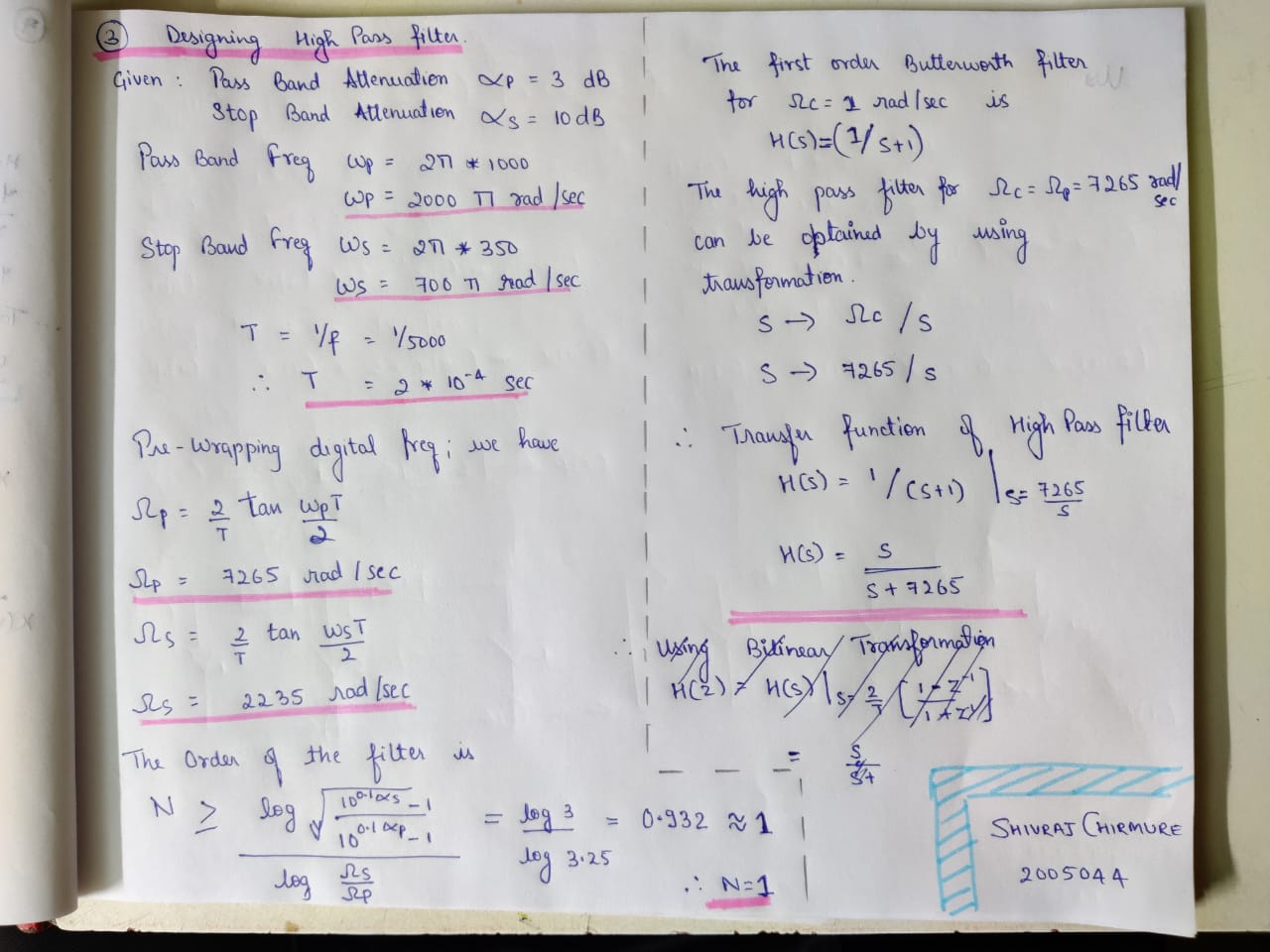
**Given:**

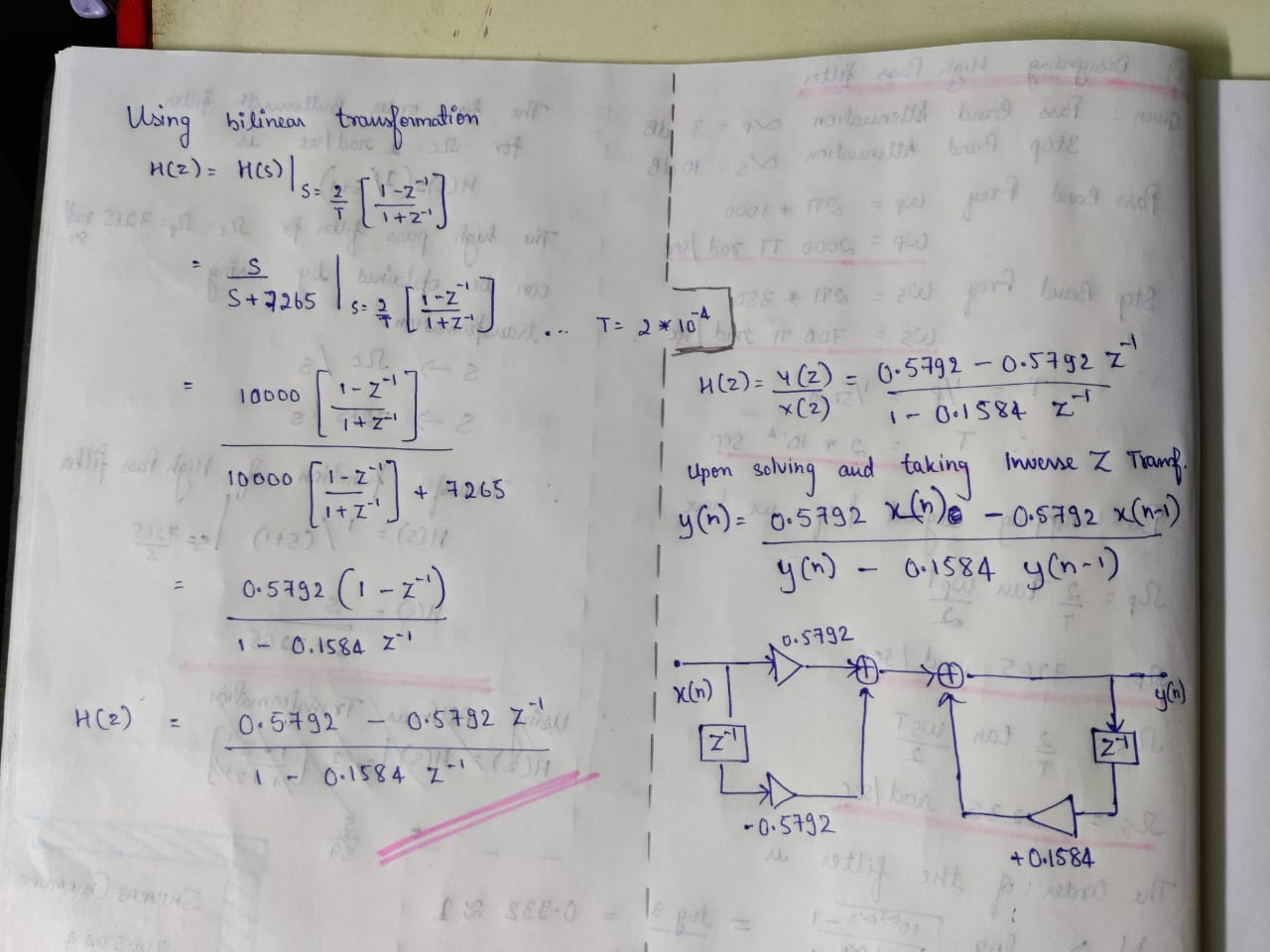
Cutoff frequency = 1000 Hz

Stop Band Attenuation = 10 dB at 350 Hz

Sampling Frequency = 5000 Hz

**Derivation:**

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**Therefore, by calculating we find that:**

Pass Band Attenuation = 3dB

Pass Band Frequency = 2000 \* pi rad/sec

Stop Band Frequency = 700 \* pi rad/sec

T = (1/f) = 2\*10^(-4) sec

**H(z) = {0.5792 – 0.5738\*z^(-1)} / {1 – 0.1584\*z^(-1)}**