

# Gate Question

EE:1205 Signals and Systems  
Indian Institute of Technology, Hyderabad

Abhey Garg  
EE23BTECH11202

## I. QUESTION GATE PH 56

Consider the complex function

$$f(z) = \frac{z^2 \sin z}{(z - \pi)^4}$$

At  $z = \pi$ , which of the following options is (are) correct?

- (A) The order of the pole is 4
- (B) The order of the pole is 3
- (C) The residue at the pole is  $\frac{\pi}{6}$
- (D) The residue at the pole is  $\frac{2\pi}{3}$

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