

PhysicsByAaryan

CSIR NET . GATE . JEST . BARC - Physics

Dirac Delta Function - CSIR NET Physics PYQs

Mathematical Physics . All PYQs (2015-2025) with answer key

3 questions . Answer key included

www.physicsbyaaryan.com . www.csirnetphysics.com

Contact: 9501976811

Q1. [June 2018] . 3.5 marks

Mathematical Physics > Dirac Delta Function

CSIR NET	2018 June	3.5M
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The value of the integral

$$\int_{-\pi/2}^{\pi/2} dx \int_{-1}^{+1} dy \cdot \delta(\sin 2x) \delta(x - y) \text{ is}$$

1. 0
2. $\frac{1}{2}$
3. $\frac{1}{\sqrt{2}}$
4. 1

Q2. [June 2023] . 5.0 marks

Mathematical Physics > Dirac Delta Function

CSIR NET	2023 June	5M
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The value of the integral $\int_{-\infty}^{\infty} dx 2^{-\frac{|x|}{\pi}} \delta(\sin x)$ where $\delta(x)$ is the Dirac delta function, is

1. 3
2. 0
3. 5
4. 1

Q3. [June 2025] . 3.5 marks

Mathematical Physics > Dirac Delta Function

CSIR NET	2025 June	3.5M	MMP
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The value of the integral

$$\int_1^e dy \int_0^5 dx \delta(x^2 - y^2) \ln(xy)$$

is

1. $\frac{1}{2}$
2. $\frac{1}{3}$
3. $\frac{1}{e}$
4. $\frac{e}{5}$

Answer Key

3 questions . Subject and topic for quick revision

Q. No	Subject	Topic	Answer
Q1	Mathematical Physics	Dirac Delta Function	2
Q2	Mathematical Physics	Dirac Delta Function	1
Q3	Mathematical Physics	Dirac Delta Function	1

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Contact

9501976811