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| GATE |
| Probability |
| PYS’s and Solution |

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| VARUN KUMAR  [Date] |

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# **CSE**

## 2025

**S1**

**Q.** A box contains 5 coins: 4 regular coins and 1 fake coin. When a regular coin is tossed, the probability 𝑃(ℎ𝑒𝑎𝑑) = 0.5 and for a fake coin, 𝑃(ℎ𝑒𝑎𝑑) = 1. You pick a coin at random and toss it twice, and get two heads. The probability that the coin you have chosen is the fake coin is \_\_\_\_\_\_\_. (rounded off to two decimal places)

**Q.** Consider a probability distribution given by the density function 𝑃(𝑥)

The probability that 𝑥 lies between 2 and 3, i.e., 𝑃(2 ≤ 𝑥 ≤ 3) is \_\_\_\_\_\_\_\_\_\_. (rounded off to three decimal places)

# **ECE**

# **EEE**

# **Civil**

# **Mechanical**

# **PI**