

# Bayesian Parameter Estimation

Total points 3/3

The respondent's email (m22cs060@iitj.ac.in) was recorded on submission of this form.

✓ Which of the following are valid probability distribution functions for a continuous stochastic variable  $x$  ? \*1/1  
 $[0 \leq x \leq 1]$

☒  $p(x) = 1$



☒  $p(x) = 2x$



☐  $p(x) = 0$

☐  $p(x) = -x$



✓ Bananas can be yellow or green. There are 100 bananas in a basket. You \*1/1 have sampled 20 bananas and 15 of them are yellow. Assuming a uniform prior probability distribution for the colours, what is your posterior belief for bananas to be yellow according to the Bayesian parameter estimation method?

- ☒ 16/22
- ☐ 15/20
- ☐ 15/100
- ☐ 1/2



- ✓ Which one(s) of the following statements are true with respect to Bayesian Parameter estimation? \*1/1
- ☒ Bayesian estimation provides a confidence level for the estimate ✓
  - ☐ Bayesian estimate is always greater than or equal to Maximum Likelihood estimation
  - ☒ Bayesian estimate is less prone to noisy data than Maximum Likelihood Estimation when number of observations are less ✓
  - ☒ Uniform distribution for prior probabilities represents weakest possible prior belief ✓

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