A

**P (run out)**

P (use more than 110L)

P (average value usage per man is >2.2L/m) (110/50 = 2.2L)

σ= 0.7l

Sampling distribution of the sample mean when n = 50

Mean

Standard deviation of sample means

=0.7/

=0.099

Average litre –mean

=2.2l-2l =0.2l

0.2l/0.099 = 2.020

P (sample mean) will be more than 2.020 of standard deviation above the mean.

Z table score of 2.02 = 0.9783

1. 0.9783 = 0.0217

= 2.17%

**B**

The significance level, also denoted as alpha or α, is the probability of rejecting the null hypothesis when it is true. For example, a significance level of 0.05 indicates a 5% risk of concluding that a difference exists when there is no actual difference.