Reporting results

Fifteen measurements of a resistance are quoted here, based on approximately 10 repeat measurements. Only three of them obey the 5 golden rules. Identify the mistakes in the other results.

Five golden rules:

1. The best estimate of a parameter is the mean.
2. The error is the standard error in the mean.
3. Round up the error to the appropriate number of significant figures.
4. Match the number of decimal places in the mean to the standard error.
5. Include units.

i. Error has too many SF $(99.8 \pm 0.270) \times 10^3\ \Omega$
ii. Mean not rounded to appropriate decimal place $(100 \pm 0.3) \times 10^3\ \Omega$
iii. OK $(100.0 \pm 0.3) \times 10^3\ \Omega$
iv. No units $(100.1 \pm 0.3) \times 10^3\ \Omega$
v. Error quoted to too many SF $97.1 \times 10^3 \pm 276\ \Omega$
vi. Error quoted to too many SF $(99.8645 \pm 0.2701) \times 10^3\ \Omega$
vii. OK, but better written as $(98.6 \pm 0.3) \times 10^3\ \Omega$ $98.6 \times 10^3 \pm 3 \times 10^2\ \Omega$
viii. Error quoted to too many SF $99.4 \times 10^3 \pm 36.0 \times 10^2\ \Omega$
ix. Mean not rounded to appropriate decimal place $101.5 \times 10^3 \pm 0.3 \times 10^3\ \Omega$
x. OK $(99.8 \pm 0.3) \times 10^3\ \Omega$
xi. Error quoted to too many SF $95.2 \times 10^3 \pm 273\ \Omega$
xii. Error quoted to too many SF $98{,}714 \pm 378\ \Omega$
xiii. Error quoted to too many SF $99000 \pm 278\ \Omega$
xiv. Mean not rounded to appropriate decimal place $98{,}714 \pm 3 \times 10^3\ \Omega$
xv. Error quoted to too many SF $98900 \pm 300\ \Omega$