

## Answers - Quiz 2

1. – Creep is defined as the tendency of a solid material to move slowly or deform permanently under the influence of stresses. It occurs as a result of long term exposure to high levels of stress that are below the yield strength of the material.

2. - Creep is more severe in materials that are subjected to heat for long periods, and near melting point. Creep always increases with temperature.

3. – Observe that with increasing load, the amount of creep deformation increases by an order of magnitude 5.

Load Applied (N)	Strain at Load Application (A)	Strain after 50 Hours under Constant Load (B)	Percentage Creep Strain $((B-A)/B) \times 100 \%$
245	0.000224238	0.000315296	28.88
490	0.000448476	0.003362340	86.66
980	0.000896953	0.094140500	99.05

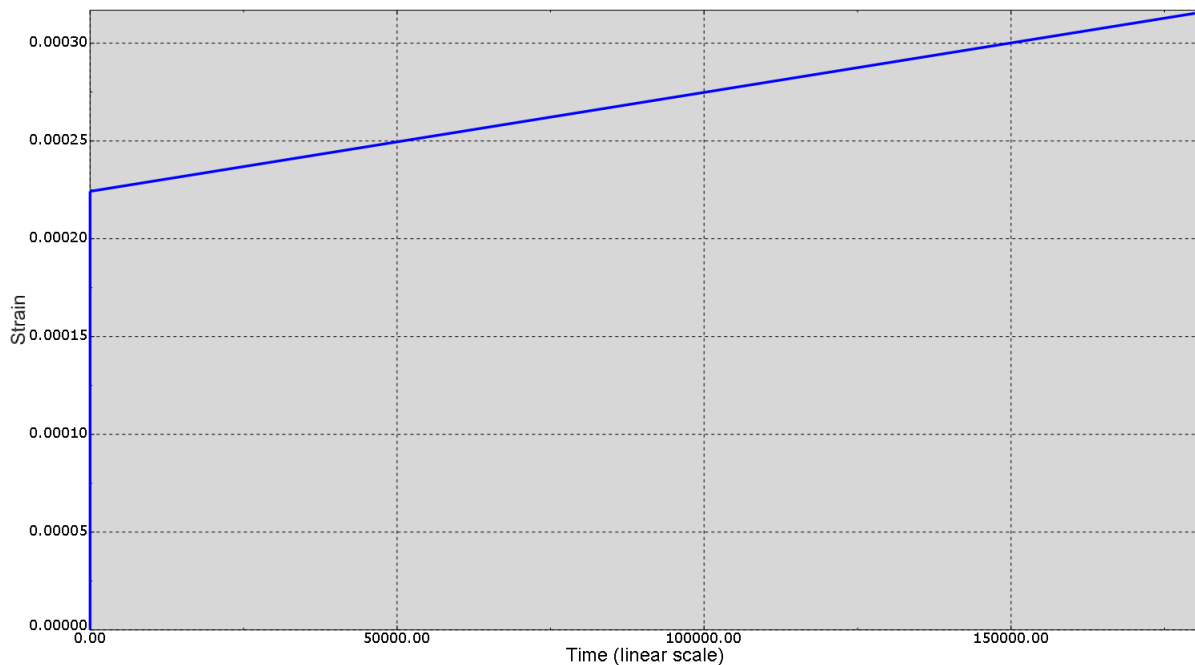


Figure 1. Strain vs. Time plot for 245 N load

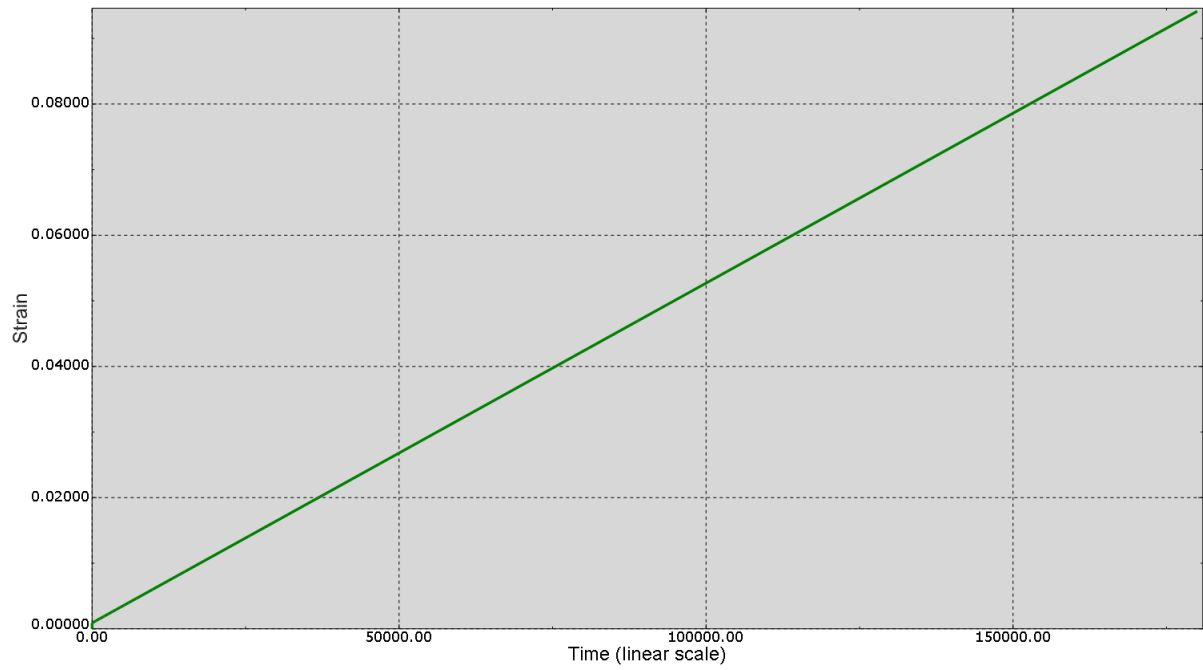


Figure 2. Strain vs. Time plot for 980 N load