



For full marks, mark your data points on the graph given in figure 1 **and** write your answers in the exam answer booklet.

Using the phase diagram for the Al-Cu binary system presented below, determine the following questions for an Al-20 wt% Cu alloy:

- 1) What phases are present at 575°C
- 2) Composition of each phase present at 575°C, in wt% Cu
- 3) What would be the fraction of liquid at 575°C
- 4) At what temperature does an alloy material of 37.5 wt% Cu begin to start melting?
- 5) At what temperature does an alloy material of 45 wt% Cu begin to start solidifying?
- 6) What is the eutectic temperature and composition for the Al-Cu system?

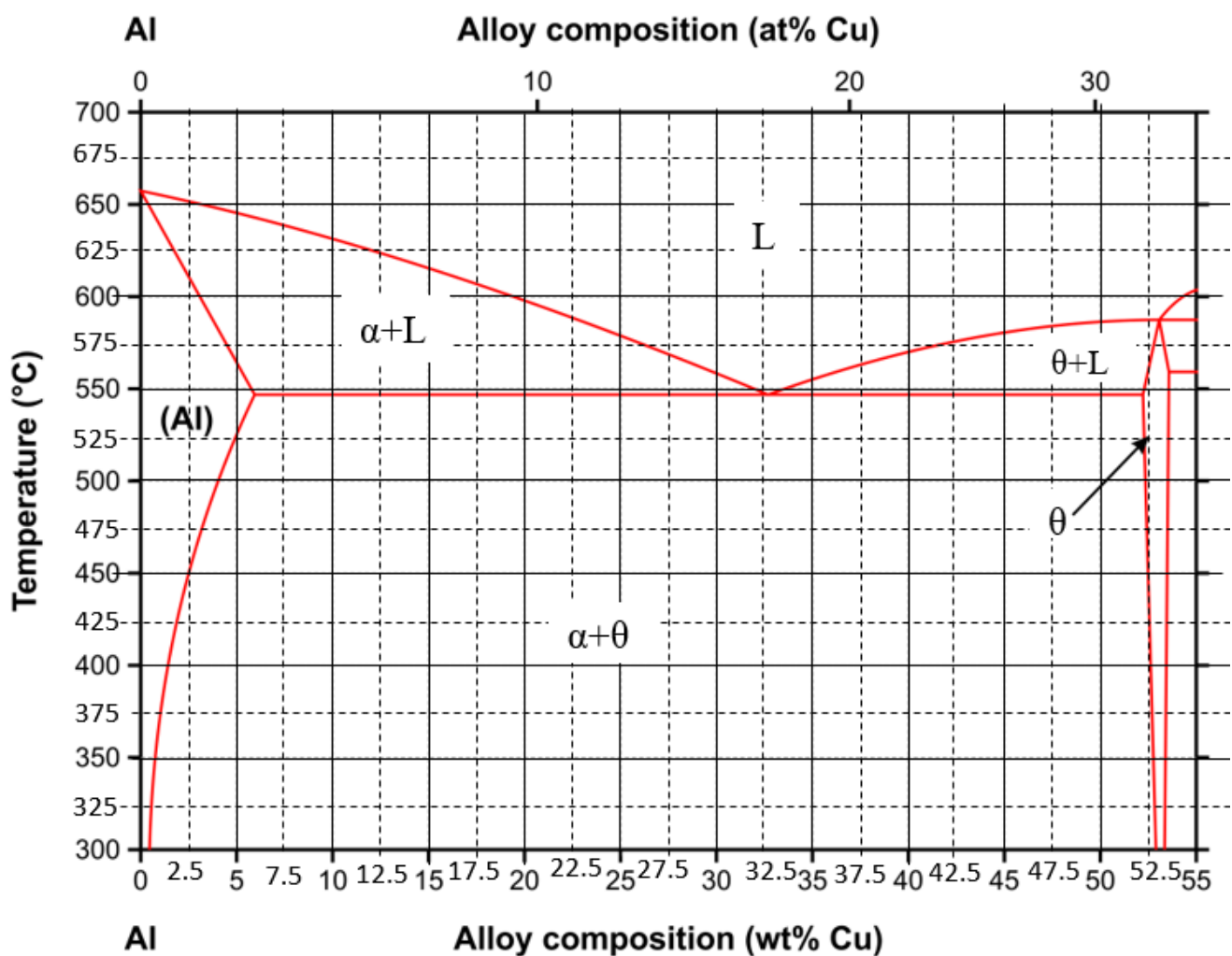


Figure 1: Al-Cu phase diagram