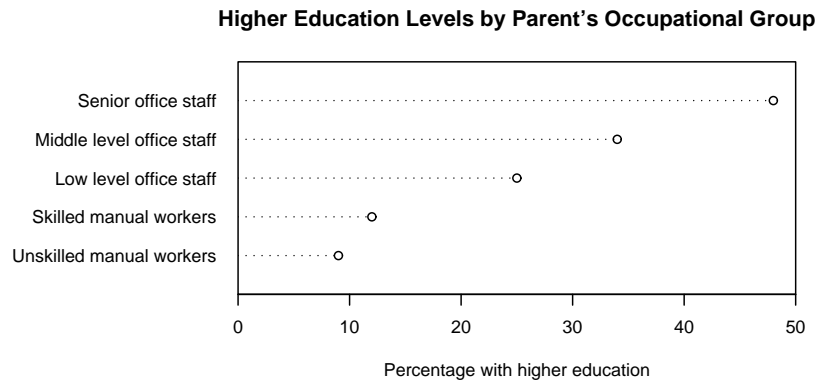


Answer all three questions. All are worth equal marks.

1. The following graph shows the proportion of the Swedish population who have higher education, broken down by their parent's occupational group.



Describe in detail how to produce this plot using R. You can assume that the following assignments have been made.

```
xv <- c(9, 12, 25, 34, 48)
xl <- c("Unskilled manual workers",
       "Skilled manual workers",
       "Low level office staff",
       "Middle level office staff",
       "Senior office staff")
```

Note that the basic plot is quite straightforward, but there are a number of subtleties in how the version above was produced.

2. Perspective has an important influence on the way we see the world around us. Describe in detail what perspective is, and how it influences our perception.
3. (a) Colour can be described as a three dimensional phenomenon. Describe three different descriptions of the three dimensional nature of colour.
- (b) Sketch the colour hexcone and explain how it is related to the HSV colour model.
- (c) Why does blue appear to be the darkest of the three primary colours which are used to produce colours on computer screens? (It is possible to answer this question on a number of different levels.)
- (d) When drawing graphs, it is important to consider the luminances of colours you might use. Why?