

**MARKS**

7

(2, 3, 2)

4. Eight people board an elevator at the first floor of a 12-storey building. If each person is equally likely to get off the elevator at any of the eleven upper floors and is not influenced by the floor at which any *other* person gets off, find the probability:

- (a) nobody gets off at the first five stops (*i.e.*, the second through sixth floors);
- (b) four people get off at the third floor and four at the twelfth floor;
- (c) all eight people get off at *different* floors.

(a)

Probability (a)

(b)

Probability (b)

(c)

Probability (c)