

COUNTING & PROBABILITY (Q 6, PAPER 2)

1996

- 6 (a) A bag contains 24 beads of which 12 are red, 8 are blue and 4 are white.
A bead is taken at random from the bag.
What is the probability that the colour of the bead is
- (i) blue
 - (ii) red or white?
- (b) There are 5 horses, *A*, *B*, *C*, *D* and *E*, in a race. Each horse takes a different time to complete the race. On completing the race,
- (i) in how many different placing arrangements can the 5 horses finish?
 - (ii) if *A* is placed first and *B* last, in how many different placing arrangements can the other horses finish?
- (c) A committee of two people is chosen at random from 4 men and 5 women.
What is the probability that there will be one woman or two women on the committee?

ANSWERS

- 6 (a) (i) $\frac{1}{3}$ (ii) $\frac{2}{3}$
(b) (i) 120 (ii) 6
(c) $\frac{5}{6}$