

COUNTING & PROBABILITY (Q 6, PAPER 2)

1999

- 6 (a) (i) In how many ways can a team of 5 players be chosen from a panel of 8 players?
(ii) If a certain player must be on the team, in how many ways can the team be then chosen.
- (b) (i) In how many different ways can the 5 letters of the word ANGLE be arranged?
(ii) How many of these arrangements begin with a vowel?
(iii) In how many of the arrangements do the two vowels come together?
- (c) Twelve blood samples are tested in a laboratory. Of these it is found that five blood samples are of type A, four of type B and the remaining three are of type O. Two blood samples are selected at random from the twelve. What is the probability that
(i) the two samples are of type A
(ii) one sample is of type B and the other sample is of type O
(iii) the two sample are of the same blood type?

ANSWERS

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|---|------------------------|---------------------|-----------------------|
| 6 | (a) (i) 56 | (ii) 35 | |
| | (b) (i) 120 | (ii) 48 | (iii) 48 |
| | (c) (i) $\frac{5}{33}$ | (ii) $\frac{2}{11}$ | (iii) $\frac{19}{66}$ |