

COUNTING & PROBABILITY (Q 6, PAPER 2)

LESSON NO. 6: PROBABILITY RULES

2001

- 6 (a) Sarah and Jim celebrate their birthdays in a particular week (Monday to Sunday inclusive).
Assuming that the birthdays are equally likely to fall on any day of the week, what is the probability that
- Sarah's birthday is on Friday
 - Sarah's birthday and Jim's birthday are both on Friday?

1999

- 6 (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
- the two samples are of type A
 - one sample is of type B and the other sample is of type O
 - the two samples are of the same blood type?

1997

- 6 (c) Two people are chosen at random from a large crowd. Each person names the day of the week on which he or she was born. Assuming that each day is equally likely, what is the probability that
- both people were born on a Friday
 - one person was born on a Tuesday and the other was born on a Thursday
 - the two people were born on different days?

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
- blue
 - red or white?

ANSWERS

- | | | | |
|-------------|--------------------------|---------------------|-----------------------|
| 2001 | 6 (a) (i) $\frac{1}{7}$ | (ii) $\frac{1}{49}$ | |
| 1999 | 6 (c) (i) $\frac{5}{33}$ | (ii) $\frac{2}{11}$ | (iii) $\frac{19}{66}$ |
| 1997 | 6 (c) (i) $\frac{1}{49}$ | (ii) $\frac{2}{49}$ | (iii) $\frac{6}{7}$ |
| 1996 | 6 (a) (i) $\frac{1}{3}$ | (ii) $\frac{2}{3}$ | |