

CHAPTER 15: PROBABILITY

Total Mark = 20
Max. time = 1 hour

① 1500 families with 2 children were selected randomly and the following data were recorded:

No. of girls in a family	0	1	2
No. of families:	211	814	475

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If a family is chosen at random, compute the probability that it has:

- ① No girl
- (ii) 1 girl
- (iii) 2 girls
- (iv) At most one girl
- (v) more girls than boys

② In a cricket match, a batsman hits a boundary 6 times out of 36 balls he plays. Find the probability that on a ball played:

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- (i) he hits boundary
- (ii) He does not hit a boundary

③ The following table gives the life time of 400 neon lamps.

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lifetime (in hour)	300-400	400-500	500-600	600-700	700-800	800-900	900-1000
No. of lamps	14	56	60	86	74	62	48

A bulb is selected at random. Find the probability that the life time of the selected bulb is:

- (i) less than 400
- (ii) between 300 to 800 hours
- (iii) at least 700 hours

④ The blood groups of 30 students of class IX are recorded as follows:

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A B O O AB O A O B A O B A O O
 A AB O A A O O AB B A O B A B O

A student is selected at random. Find the probability:

- (i) A
- (ii) B
- (iii) AB
- (iv) O
- (v) C

5) A company selected 2400 families at random and survey them to determine a relationship b/w ~~in~~ ~~the~~ income level and the number of vehicles in a home. The information gathered is listed in the table below:

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Monthly income (in Rs)	Vehicle per family			
	0	1	2	Above 2
Less than 7000	10	160	25	0
7000-10000	0	305	27	2
10000-13000	1	535	29	1
13000-16000	2	469	29	25
16000 or more	1	579	82	88

If family is chosen, find the probability that the family is:

- (i) earning Rs 10000-13000 per month and owning exactly 2 vehicles.
- (ii) earning Rs 16000 or more per month and owning exactly 1 vehicles.
- (iii) earning Rs less than 7000 per month and does not own any vehicles.
- (iv) owning not more than 1 vehicles.
- (v) owning at least one vehicles.



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