

SAMPLE PAPER 4: PAPER 2**QUESTION 5 (25 MARKS)**

x	1	2	3	4	5
$P(x)$	0.1	0.2	0.3	0.3	0.1

Question 5 (a) (i)

$$P(\text{At least 3}) = 1 - [P(1) + P(2)]$$

$$= 1 - 0.1 - 0.2 = 0.7$$

Or

$$P(3) + P(4) + P(5) = 0.3 + 0.3 + 0.1 = 0.7$$

Question 5 (a) (ii)

$$\bar{x} = \frac{\sum xP(x)}{\sum P} = \frac{9(0.1) + 2(0.2) + 3(0.3) + 4(0.3) + 5(0.1)}{0.1 + 0.2 + 0.3 + 0.3 + 0.1} = 3.1$$

Gender	For	Against	Total
Male	58	85	143
Female	84	73	157
Total	142	158	300

Question 5 (b) (i)

$$P(\text{Male and Against treaty}) = \frac{85}{300} = \frac{17}{60}$$

Question 5 (b) (ii)

$$P(\text{Female or For treaty}) = \frac{58 + 157}{300} = \frac{43}{60}$$

Question 5 (b) (iii)

$$P = \frac{58}{142} = \frac{29}{71}$$
