

## Answers

1.	Maximize $z = x + 1.50 y$ subject to the constraints: $x + 2y \leq 40$ , $2x + y \leq 40$ , $x + y \leq 25$ , $x \geq 0$ , $y \geq 0$ . Maximum profit is ₹ 32.5 and 10 half sleeve shirts and 15 full sleeve shirts should be made per week to maximize profit.	(ISC 2020)
2.	Maximize Profit (in ₹), $z = 30 x + 20 y$ Subject to the constraints $12x + 6y \leq 360$ or $2x + y \leq 60$ $6x + 9y \leq 360$ or $2x + 3y \leq 120$ $x \geq 0$ , $y \geq 0$ When 15 toys of type A and 30 toys of type B are manufactured per day, profit is maximum and maximum profit is ₹ 1050.	(ISC Sem 2-2022)
3.	$Z$ has maximum value at (3.5, 0.75) and maximum value of $Z = 19$ .	(ISC 2023)