Q7. What happens to the budget set if both the prices as well as the income double?
Ans: If the prices and the income are doubled, then the budget line will remain unchanged.

$M_1 = \text{Rs. } 20, M_2 = \text{Rs. } 40$

$P_1 = \text{Rs. } 4, P_1 = \text{Rs. } 8$

$P_2 = \text{Rs } 5, P_2 = \text{Rs. } 10$

$$\text{Horizontal intercept} = \frac{M_2}{P_1} = \frac{40}{8} = 5$$

$$\text{Vertical intercept} = \frac{M_2}{P_2} = \frac{40}{10} = 4$$

$$\text{Slope} = \frac{-P_1}{P_2} = \frac{-8}{10} = -0.8$$

Hence, the vertical intercept, the horizontal intercept and the slope of the budget line will remain the same. The new budget line will be the same as the old budget line but associated with higher income and higher prices of both the goods.

Q8. Suppose a consumer can afford to buy 6 units of good 1 and 8 units of good 2 if she spends her entire income. The prices of the two goods are Rs 6 and Rs 8 respectively. How much is the consumer's income?

Ans: $P_1 = \text{Rs. } 6$

$P_2 = \text{Rs. } 8$

$x_1 = 6$

$x_2 = 8$

$\text{Budget line} = M = P_1 x_1 + P_2 x_2$

$M = 6 \times 6 + 8 \times 8$

$M = 36 + 64$

$M = 100$

Thus, the consumer's income is Rs 100.

********** END **********