To evaluate this, we need to first understand the question.

Given are the following details:

|  |  |
| --- | --- |
| List Price of Car | $32,000 |
| Sales Tax (Applicable on gross sales – any discounts) | 7% = 0.07 |
| Discount offered by dealer (if he does not trade his car) | 15% = 0.15 |
|  |  |

Now, let us do some calculations.

Let’s say he trades his old car. Then, he has to pay $20,000 + sales tax. Sales tax is given by $20,000 x 0.07 = $1,400.

Thus, he needs to pay $21,400 in total.

If he does not trade his old car, then he has to pay sales + taxes.

Sales = 0.85 x $32,000 = 27,200.

The taxes that would be recorded would be $32,000 x 0.07 = $2,240.

Thus, he would have to pay $29,440.

Table summarizes these results:

|  |  |  |
| --- | --- | --- |
| Transaction | Amount to be Paid | Sales Tax Applicable |
| Without trade-in of the old car | 29,440 | 2,240 |
| With trade-in of the old car | 21,400 | 1,400 |

If the person wants to minimize the sales tax, they should go with the trade-in offer as it reduces the taxes as much as possible.

Note that the $12,000 (which is the trade-in price of the old car) does NOT serve as a discount by the dealer because the dealer is earning a revenue by accepting a cash equivalent.