

## QUANTITATIVE TECHNIQUES QUESTIONS – SAMPLE SET FOR MAY 31, 2020

1. Hare-Bhare store had an opening stock of  $x$  perishable goods with an expiry date of August 2020. The store received new stock with an expiry date of July 2020. In order to avoid spoilage, the management decided to sell the new stock before the old. A certain quantity of the new stock was sold to the first customer. To the second customer, the same quantity of the new stock as in the previous sale and a certain quantity of the old stock was sold because the store ran out of the new stock. The same quantity of the old stock was sold to each of the third and fourth customers as to the second. The total quantity of new stock sold is equal to the total quantity of old stock sold.

Use the information to answer the questions below. Any additional information required will be provided in the questions.

- 1.1 Of the total opening stock, what fraction remained unsold?

- (a) New stock / Old stock
- (b) [Old stock – New stock] / Old stock
- (c)  $1 - [\text{New stock} / \text{Old stock}]$
- (d) [Old stock + New stock] / Old stock

- 1.2 If  $\frac{3}{4}$ th of the old stock was sold, what fraction of the total stock was sold?

- (a)  $\frac{6}{7}$
- (b)  $\frac{4}{7}$
- (c)  $\frac{1}{7}$
- (d)  $\frac{3}{7}$

- 1.3 Quantity of old stock sold per customer / Quantity of new stock sold per customer is equal to:

- (a)  $\frac{1}{3}$
- (b)  $\frac{2}{3}$
- (c)  $\frac{3}{2}$
- (d)  $\frac{3}{1}$

- 1.4 The store received the third stock, which was thrice the remainder of the old stock, with an expiry date of August 2020. This time the management decided to sell the old and new stock to every alternate customer, starting with the old stock. The same quantity of stock was sold to four customers, with one customer receiving half from the old and half from the new stock because the store ran out of the old stock. The quantity of the new stock sold as a fraction of the total new stock is equal to:

- (a) [Quantity sold per customer] / 4 [Opening stock]

- (b)  $5 \text{ [Quantity sold per customer]} / 2 \text{ [Opening stock]}$
- (c)  $10 \text{ [Quantity sold per customer]} / 3 \text{ [Opening stock]}$
- (d)  $5 \text{ [Quantity sold per customer]} / 6 \text{ [Opening stock]}$

1.5 If  $x = 120$ , what is the quantity sold to the fourth customer in question 1.4?

- (a) 21
- (b) 26
- (c) 25
- (d) 20

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