

Given that,

$$\frac{1}{2}C = 55 \text{ cm}; L = 72 \text{ cm}; SL = 18 \text{ cm}; GSM = 140$$

$$\text{Wastage, } W\% = (100 - 86) = 14\%$$

$$\text{Neck width} = 18 \text{ cm}; \text{Neck Rib height} = 1.5 \text{ cm}$$

$$\text{GSM of Rib} = 220$$

Body fabric consumption =

$$\frac{L + SL + AL}{100} \times \frac{\frac{1}{2}C + AL}{100} \times \frac{\text{GSM}}{1000} \times 2 \times 12 \times W\%$$

$$= \frac{72 + 18 \times 10}{100} \times \frac{55 + 4}{100} \times \frac{140}{1000} \times 2 \times 12 \times 14\%$$

$$= 1.98 + \left(\frac{1.98}{100} \times 14 \right)$$

$$= 1.98 + 0.28$$

$$= 2.26 \text{ kg/dz}$$

$$\text{Width} = \text{Neck width} \times 2 + 2 \text{ cm} = 18 \times 2 + 2 = 38 \text{ cm}$$

$$\text{Total weight} = \text{Rib height} \times 2 + AL = 1.5 \times 2 + 2 = 5 \text{ cm}$$

Work Rib consumption B

$$= \frac{\text{Length in cm} \times \text{width in cm} \times \text{density} \times 2}{10^7} \text{ kg}$$

$$= \frac{38 \times 5 \times 220 \times 2}{10^7} * 14\% = 0.057$$

$$= 0.057 + \left(\frac{0.05}{100} \times 14 \right)$$

$$= 0.057 + (7 \times 10^{-3})$$

$$= 0.0577 \text{ kg/dz}$$

Total consumption = (A+B)

$$= 2.26 + 0.0577$$

$$= 2.317 \text{ kg/dz}$$

Answer

2//

$$L = 76 \text{ cm} ; SL = 24.8 \text{ cm} ; \frac{1}{2} C = 58 \text{ cm} ; AL = 2 \text{ cm}$$

$$\text{Neck width} = 25 \text{ cm} ; \text{Rib Height} = 1.5 \text{ cm}$$

$$\text{Wastage, } W = 10\% ; GSM = 140$$

Body fabric consumption A =

$$\frac{L+SL+AL}{100} \times \frac{\frac{1}{2}C+AL}{100} \times \frac{GSM}{1000} \times 2 + W\%$$

$$= \frac{76+24.8+2}{100} \times \frac{58+2}{100} \times \frac{140}{1000} \times 2 + 10\%$$

$$= 1.1 \times 0.62 \times 0.14 \times 2 + 10\%$$

$$= 0.19 + \left(\frac{0.19}{100} \times 10 \right)$$

$$= 0.19 + 0.019$$

$$= 0.21 \text{ kg}$$

$$= 210 \text{ gram}$$

Neck Rib consumption B:

$$\text{width} = \text{neck width} \times 2 + 2 \text{ cm}$$

$$= 25 \times 2 + 2 = 52 \text{ cm}$$

$$\text{Total Height} = \text{Rib Height} \times 2 + AL = 1.5 \times 2 + 2 = 5 \text{ cm}$$

Net Rib consumption, B =

$$\frac{\text{length mm} \times \text{width mm} \times \text{GSM}}{10^7} + W$$

$$= \frac{52 \times 5 \times 140}{10^7} + 10^{-1}$$

$$= 3.64 \times 10^{-3} + \left(\frac{3.64 \times 10^{-3}}{100} \times 10 \right)$$

$$= (3.64 \times 10^{-3}) + (3.64 \times 10^{-4})$$

$$= 4 \times 10^{-3} \text{ kg}$$

$$= 4 \text{ gram}$$

$$\text{Total consumption} = A + B$$

$$= 210 + 4$$

$$= 214 \text{ gram}$$

Difference of calculated weight and actual weight = (calculated weight - actual wt)

$$= (214 - 178)$$

$$= 36 \text{ gram Answer}$$