Q15.) In an examination a candidate secured 125 marks and failed by 15 marks. If the pass percentage was 35%; Find the maximum marks.

Ans→ Total marks secured = 125

Failed by 15 marks

∴ pass marks = 125 + 15 = 140

Let maximum marks = x

$\therefore x \times \frac{35}{100} = 140$

$\Rightarrow x = \frac{140 \times 100}{35} = 4 \times 100 = 400$

Hence maximum marks = 400

Q16) In an objective type paper of 150 questions; John got 80% correct answers and mohan got 64% correct answers.

(i) How many correct answers did each get?

(ii) what percent is mohan's correct answers to John's correct answers?

Ans→ Total questions = 150

John got correct answers = 80%

mohan got correct answers = 64%

(i) Number of correct answers got by John

$= \frac{80}{100} \times 150 = 120$

number of correct answers got by mohan.

$= \frac{64}{100} \times 150 = \frac{64}{4} \times 6 = 96$

(ii) % of mohan's correct answers to John's correct answers

$= \frac{96}{120} \times 100 = \frac{4}{5} \times 100$

$= 4 \times 20 = 80\%$

Q17) The number 8,000 is first increased by 20% and then decreased by 20%. Find the resulting no.

Ans→ The resulting number = The original number

$\times \left[1 + \frac{20}{100}\right] \times \left[1 - \frac{20}{100}\right]$

$= 8000 \times \frac{120}{100} \times \frac{80}{100} = 7,680$

Q18.) The number 12,000 is first decreased by 25% and then increased by 25%. Find the resulting no.

Ans→ The resulting = The original number $\times \left[1 - \frac{25}{100}\right] \times \left[1 + \frac{25}{100}\right]$

$= 12000 \times \frac{75}{100} \times \frac{125}{100} = 11,250$

Q19.) The cost of an article is first increased by 20% & then decreased by 30% Find the percentage change in the cost of the article.

Ans→ Let the original cost = ₹100
increased by 20%
∴ new cost = 100 + 20 = ₹120
decreased by 30% = $\frac{120 \times 30}{100}$ = ₹36
∴ new cost = 120 - 36 = ₹84
overall change = 100 - 84 = ₹16
Required percentage = $\frac{16}{100} \times 100$ = 16% decrease

Q20.) The cost of an article is first decreased by 25% and then further decreased by 40%. Find the percentage change in the cost of the article.

Ans→ Let the original cost = ₹100
decreased by 25%
∴ new cost = 100 - 25 = ₹75
decreased by 40% = $\frac{75 \times 40}{100}$ = ₹30
∴ new cost ₹75 - 30 = ₹45
overall change = 100 - 45 = ₹55
Required percentage = $\frac{55}{100} \times 100$ = 55% decrease