Scaled Score Calculation

Calculation of scaled score of a candidate:

Following steps are followed to calculate the scaled score of a candidate in each of the three sections, i.e. VARC, DILR and QA in CAT 2020. The overall scaled score is obtained by adding scaled scores of these three sections. While illustrating the scaling process, QA section is chosen as an example. Similar process is valid for the other two sections, i.e. DILR and VARC. Three sessions of CAT examination are expressed as morning session (8:30 AM – 10:30 AM), afternoon session (12:30 PM – 2:30 PM) and evening session (4:30 PM – 6:30 PM), on November 29, 2020.

Step 1: Calculate the mean and the standard deviation (SD) of the raw scores in QA section for all candidates appearing in the morning session.
Let Mean = M_1 and SD = S_1 and $G_1 = M_1 + S_1$.

Step 2: Calculate the mean and the standard deviation (SD) of the raw scores in QA section for all candidates appearing in the afternoon session.
Let Mean = M_2 and SD = S_2 and $G_2 = M_2 + S_2$.

Step 3: Calculate the mean and the standard deviation (SD) of the raw scores in QA section for all candidates appearing in the evening session.
Let Mean = M_3 and SD = S_3 and $G_3 = M_3 + S_3$.

Step 4: Calculate the mean and the standard deviation (SD) of the raw scores in QA section for all candidates appearing in CAT (i.e. including all the three sessions).
Let Mean = M and SD = S and $G = M + S$.

Step 5: Calculate the mean raw score in QA section of the top 0.1% candidates in the morning session and denote it by $M_1^{0.1}$.

Step 6: Calculate the mean raw score in QA of top 0.1% candidates in the afternoon session and denote it by $M_2^{0.1}$

Step 7: Calculate the mean raw score in QA of top 0.1% candidates in the evening session and denote it by $M_3^{0.1}$

Step 8: Calculate the mean raw score in QA of top 0.1% candidates appearing in CAT (i.e. considering all the three sessions) and denote it by $M^{0.1}$.

Suppose now **XYZ** is a candidate who appeared in the morning session and her raw score in QA section is R. Then the scaled score of **XYZ** in QA, say $\hat{R}$ given by:

$$\hat{R} = (R - G_1)\frac{M^{0.1} - G}{M_1^{0.1} - G_1} + G$$

In case **XYZ** is a candidate who appeared in the afternoon session and her raw score in QA section is R. Then the scaled score of **XYZ** in QA, say $\hat{R}$ given by:

$$\hat{R} = (R - G_2)\frac{M^{0.1} - G}{M_2^{0.1} - G_2} + G$$

In case **XYZ** is a candidate who appeared in the evening session and her raw score in QA section is R. Then the scaled score of **XYZ** in QA, say $\hat{R}$ given by:

$$\hat{R} = (R - G_3)\frac{M^{0.1} - G}{M_3^{0.1} - G_3} + G$$

Similar Methodology is applied for computation of scaled scores for other sections.

If this formula yields any scaled score as more than 100, it will be rounded down to 100.