

For single CUET rank list, UGC banks on equipercentile model

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The scorecard of a candidate will have percentiles and "normalised" scores, not raw marks, for each subject. Universities will use the normalised marks for preparing the ranking list for admissions.

Explaining the methodology, University Grants Commission chairperson M Jagadeh Kumar said: "In the equipercentile method, we use the same scale for all candidates independent of which session they have appeared in in a given subject, making their performance comparable across sessions."

Over nine lakh aspirants for undergraduate programmes of around 90 universities are waiting for their CUET-UG results, which the UGC has said will be declared by September 15.

In this year's CUET-UG, the challenge before the UGC was to prepare a single ranking list for admissions although the tests were held in multiple shifts on different days. CUET-UG was conducted in 27 different subjects with freedom to the candidates to opt for a combination of these subjects. The scores are to be used by several universities across the country for admission to UG programmes.

"How were we going to

compare the performance of different students who wrote the test in the same subject but on different days? We needed to ensure that the admissions are made based on a score that accurately compares the performance of the students," said M Jagadeh Kumar, chairperson, UGC.

"In addition to the above difficulty, in subjects such as sports or fine arts, some weightage (say 25%) is given to the skill component by some universities. But, additional raw marks of the skill component and the remaining weightage (75%) of percentile cannot be done to prepare rank list because that would be akin to adding oranges to apples."

"A solution to this situation is the use of the equipercentile method. In this, normalised marks of each candidate are calculated using the percentiles of each group of students in a given session across multiple days for the same subject," said Kumar.

To calculate the normalised marks, the raw marks of each student is used to determine the candidate's percentile in his or her exam shift. For example, assume that 100 students have appeared for the test in a particular shift. Their marks are sorted in decreasing order. Say, a student has score 87% marks. Now assume that 80 out

of 100 students have secured less than or equal to 87% marks. The percentile of this student would be $80/100=0.8$. The percentile will always be between "0" and "1" and it is usually rounded off to the requisite number of decimal places.

Now, assume that the test for a single subject was held over 10 shifts. Each student will have appeared in one shift and would be "absent" in nine shifts. The raw scores in these "absent" shifts for each student are calculated using a statistical method called "interpolation". Once raw marks are assigned to each student across all the shifts in which the subject exam took place, these marks are then averaged and a percentile arrived at on the basis of these average marks. Also, a "pull back" of the percentile score is necessary to a distribution which would be close to the actual "observed distribution". This pull-back score is the "normalised" score.

Kumar said, "Each percentile value of the candidates sorted in a descending order will have raw marks for all shifts. We then calculate the average of the actual raw marks in one shift and the raw marks obtained using interpolation in other shifts. This will give normalized marks for the percentile of each candidate..."

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