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**Original article  
Item analysis of Multiple Choice Questions in Physiology examination.  
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**Abstract**

**Introduction:** Multiple choice questions (MCQs ) /Items are frequently used to assess students in different educational streams for their objectivity and wide reach of coverage in less time. However the items to be used must be of good quality . The present study was conducted in a medical college of Mumbai with the **Objective** of evaluation of items to develop a pool of valid items & to update question bank for designing question paper as per the need of assessment.

**Methods:** Total 40 items from physiology preliminary examination of 100 students of 1st year M.B.B.S. were analysed. Each item was analysed for Difficulty index, Discrimination index and Distracter effectiveness.

**Results:** After statistical analysis of data, it was **observed** that Difficulty index i.e. ‘p’ value of analysed MCQs ranged from 6.25% (lowest) to 90.6% (Highest) & Discriminative index i.e. ‘d’ value ranged from 0 (lowest) to 0.63 (Highest). Total 65% items were in acceptable range of difficulty level (‘p’ value 30 – 70%) & 10 % items were very difficult which later discussed with students. Discrimination index of 60% items was excellent (d value>0.35). No item had Negative discriminative power. About 47.5% items had100% Distracter Efficiency (DE) whereas 7.5% items had 0% DE.

**Conclusion:** Item analysis definitely helps to update & strengthen MCQ bank. It helps in question paper setting as per the need of assessment. It improves Teaching – Learning outcomes.

**Key words** - item analysis, difficulty index, discrimination index, distracter effectiveness