

Bennett Mechanical Comprehension Test[®] (BMCT-II) UK

FAQs



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Bennett Mechanical Comprehension Test® II

Frequently Asked Questions

The Bennett Mechanical Comprehension® Test II (BMCT-II) launched in the UK in 2018. This document provides answers to the most frequently asked questions about its features and administration.

About BMCT-II Features

What does BMCT-II Measure?

BMCT-II measures the ability to understand and apply basic mechanical and physical concepts to solve problems, as well as an individual's understanding of the key principles underlying the workings, maintenance, and repair of machinery and equipment.

It is widely used to screen job applicants applying for a variety of roles including mechanical and manufacturing.

What are the most important features in the BMCT-II?

- BMCT-II contains 55 items that are randomly generated from a bank of 300 items.
- Reducing the number of items (from 68 in BMCT-I*) to 55 has shortened the administration time by 5 minutes.
- BMCT-II includes colour artwork with more contemporary items.
- BMCT-II is suitable for supervised or unsupervised testing scenarios. Selecting items from a large bank ensures that the chances of two applicants receiving the exact same set of questions is miniscule. This protects the integrity and difficulty level of the test.
- BMCT-II is now available in UK & US English, French, French Canadian, Dutch, Castilian Spanish, and US Spanish

* BMCT-I collectively refers to previous forms of the Bennett Mechanical Comprehension Test including Form S, Form T, and Form S and T (Randomized).

What norms are available for BMCT-II UK?

At launch, the following norms are available for the UK version. They were built using US test-taker scores.

- General Labor (2018)
- Industrial/Technical Sales (2018)
- Installation/Maintenance/Repair (2018)
- Machine Operators/Machinists (2018)
- Manufacturing and Production (2018)
- Mechanics (2018)
- Skilled Trades (2018)
- Vocational/Technical Students (2018)
- Engineers (2018)
- Energy and Utilities (2018)

What research has been conducted with the new BMCT-II?

We have carried out construct validity, criterion validity, and parallel form reliability/equivalence studies between BMCT-I and BMCT-II which are described in the new User's Manual.

What is the level of equivalence of BMCT to DAT Mechanical Reasoning?

DAT Mechanical Reasoning and BMCT-II have a very similar content and tap into the same constructs. A correlation co-efficient of $r=.81$ was found between the scores of a pool of individuals taking DAT PCA Mechanical Reasoning and BMCT-II. DAT is only available in paper format, however, and suitable for supervised testing.

Score Interpretation

How do you ensure that the randomly generated tests presented to candidates are equivalent in terms of test difficulty and item content?

Each item is coded by difficulty on a finely incremented scale and assigned a difficulty level from 'easy' to 'high'. Tests are generated with equivalent numbers of items in each difficulty category. Consistency in content is also achieved by coding items in terms of the content assessed (e.g., Electricity, Heat, Hydraulics) and specifying a set amount of each item type per test. The tests may differ slightly in difficulty overall, but this is taken into account by the online scoring system.

What scores are available on candidate profile reports?

Number Correct, T-score, STANINE score, and STEN score are all reported in the Additional Technical Information section of the candidate's profile report. Item-banked tests produce a theta score that takes into account the difficulty level of each item, therefore the number of correct responses (raw score) should not be used to make hiring decisions alone. Instead, use the percentile rank or a standardized score because these scores take into account the item-difficulty differences of the administrations. Candidate theta scores, also called ability scores, are available in the online account status/score report dashboard.

Why aren't raw scores presented in the profile reports?

The raw score for BMCT-I (and DAT) was the total number of correct responses. As test-takers completing the BMCT-II are presented with varying sets of items that differ slightly in difficulty, little can be inferred from traditional raw scores. The scoring system takes into account the exact difficulty level of the items each person has completed to calculate an estimate of ability— a theta score, which is converted to a percentile for interpretation purposes.

How should I transition from using the original Bennett norms to the BMCT-II norms?

If you are already making hiring or promotion decisions using a norm group in the original Bennett product, continue using the original Bennett until there is an appropriate time to make the transition to the BMCT-II product. An appropriate time would be after you have made a hiring decision for a specific position and will be testing a new group of applicants for another position.

What if I have already determined cut scores based on the original Bennett scales?

You may continue to use the BMCT-I until you collect sufficient data with the BMCT-II to establish new cut scores. Do not use cut scores that you created for the original Bennett with the BMCT-II.

What can be done if there is concern that an applicant has cheated on the unsupervised BMCT-II?

If you suspect that a candidate cheated on the assessment, you may retest the candidate in a supervised setting. The decision to retest a candidate is up to the customer.

BMCT-II Administration

Can BMCT-II be linked from the Pearson test platform for administration via an API/ATS?

Yes, it should be possible but contact your local Customer Support for more information. Contact details can be found on www.Talentlens.co.uk

Can a candidate's BMCT-II results be re-scored using a different norm group?

Administrators are encouraged to select the most appropriate norm group when assigning a test to a candidate. It is possible, through the platform, to generate a completed test score against another norm, however.

Is the BMCT-I still available online?

Effective January 2017, BMCT-I is no longer available for purchase in the Pearson catalogue.

Is a paper form of BMCT-II available?

A paper form is currently available for the BMCT-II in US English and US Spanish.

Can the BMCT-II be completed on a mobile phone?

We recommend that the BMCT-II be completed on a desktop or laptop computer with a dependable internet connection.

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