

ABSTRACT

Cindi Elvani, ID 4173121005 (2017). The Development Of Objective Test For Conceptual Knowledge Of Mechanical Waves Topic In High School.

This study aims to develop an objective test of conceptual knowledge of physics on Mechanical Waves material in high school that meets good test qualification standards, covering aspects of validity, reliability, level of difficulty, discriminating power and effectiveness of distractors. This type of research is research development or Research and Development (R&D), with the ADDIE model. The population of this study were all students of SMA Negeri 2 Percut Sei Tuan with the subject of all students of class XI MIA SMA Negeri 2 Percut Sei Tuan. The instrument used in this study was a multiple-choice test of 50 items to measure conceptual knowledge. The results showed that the content validity by experts of the objective test of conceptual knowledge of physics on Mechanical Waves material in high school was very good. Judging from the empirical validity of the broad field test, 37 valid items and 13 invalid items were obtained. The reliability of the test is 0.91. The level of difficulty obtained 7 easy questions, 27 moderate questions, and 4 difficult questions. The discriminatory power obtained 30 items very good, 5 items good, 2 items enough, and 1 item not good. Based on the effectiveness of the distractors, 20 distractors were found to be inefficient or the distractors were not functioning. This conceptual knowledge test can be used as a standard test to measure students' conceptual knowledge on the Mechanical Wave material in high school.

Key words: *Conceptual Knowledge, Mechanical Wave, Validity, Reliability*