## THE STANDARDIZATION OF ENGLISH TEACHERS-MADE OBJECTIVE TEST AT SMAN 3 PALOPO



A THESIS

# Submitted to the English Language Studies Program of S1 Tarbiyah and Teaching Science Faculty of Institute for Islamic Studies of Palopo in Partial Futfillment of Requirement for S.Pd <br> Degree in English Education 

By
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ENGLISH STUDY PROGRAM OF TARBIYAH AND TEACHING SCIENCE FACULTY OF INSTITUTE FOR ISLAMIC STUDIES (IAIN) PALOPO
(2018)

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## THESIS APPROVAL

This thesis entitled "The Standardization of English Teachers-Made Objective Test at SMAN 3 Palopo" which is written by Nurul Ainun Islamia, Reg. Number 14.16.3.0167, English SI Study Program of Tarbiyah and Teacher Training Faculty of The State Institute for Islamic Studies (IAIN) Palopo, and has been examined and defended in MUNAQASYAH session which is carried out on Thursday, August $\mathbf{1 6}^{\text {th }}$ $\mathbf{2 0 1 8} \mathbf{~ M}$, coincided with Dzulhijjah $4^{\text {th }} \mathbf{1 4 3 9} \mathbf{~ H}$, it is authorized and acceptable as partial fulfillment of requirement for S.Pd, degree in English language teaching.

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## MOTTO

"Barang siapa yang mempermudah urusan orang lain, maka inshaa Allah. Allah akan memudahkan segala urusannya.
"Do not stop learning because life never stops teaching."
"Kurang cerdas dapat diperbaiki dengan belajar, kurang cakap dapat dihilangkan dengan pengalaman, namun sikap tidak jujur itu sulit untuk diperbaiki."

- Mohammad Hatta


#### Abstract

ISLAMIA, NURUL AINUN. 2018, The Standardization of English Teachers-Made Objective Test at SMAN 3 Palopo (A Case Study in Even Semester of First and Second Year SMAN 3 Palopo), English Language Studies Program of S1 Tarbiyah and Teaching Science Faculty of Institute for Islamic Studies of Palopo. Supervisor by:(1) Madehang, S.Ag, M.Pd and (2) Muh. Irfan Hasanuddin, MA.


Key Word: Validity, Reliability, Item Difficuly, Discrimination Power

This research aimed to find out the standardization of English teachers-made Objective test at SMAN 3 Palopo based on the principles of language testing assessment those were criterion validity, internal reliability, item difficulty and discrimination power. This research was quantitative research that supported by qualitative approach.

The object of this research was the multiple-choice tests made by English teachers of SMAN 3 Palopo. The instruments of the research were documentation and interview. The researcher used quantitative method in analyzing the data after collecting the students answer sheets and blueprint of SMAN 3 Palopo.

The result of reliability coefficient of the first year was 1.01 and second year was 1.51 . It showed that the test of first and second year had highly reliable. The first year SMAN 3 Palopo had 18 items were valid and 16 items were invalid. Meanwhile in the second year found 22 items were valid and 8 items invalid. The item difficulty of the first year found 4 items were in difficult level is accepted whereas in the second year found only 1 item is accepted. Item discrimination of the first year were 27 items had low discrimination power and in the second year items there were 11 items had low discrimination power with accepted category. Regarding the research findings, the test items made by the English teacher in the first year of SMAN 3 Palopo had a minimum of items validity. It was different with the teacher in the second year of SMAN 3 Palopo which had more valid multiple choice items. Eventhough such was the case, the teachers at SMAN 3 Palopo had low standardization of multiple choice test and the multiple choice tests must be improved so as were able to measure the expected competency.

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Palopo, August $13^{\text {th }} 2018$

The Researcher


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## CHAPTER I

## INTRODUCTION

## A. Background

Teacher is a professional educator who has prominent work to educate, teach, lead, direct, train, and evaluate the students. To achieve those goals, teachers' competences are needed to show the quality of the teachers itself. In an article 28 clause 3 Government Regulation No. 192005 about the standard of national education decided clearly that there are four competences teacher must have. Those are pedagogic competence, personality competence, professional competence, and social competence. ${ }^{1}$ In pedagogic competence, one of competences that teachers should have is arrange the instrument to evaluate the students' ability. Like Areta Wulan Dari stated that one of some techniques for collecting information for evaluation is by using a test. Test is a tool or procedure used to measure and appraise. By testing, the teachers can get information related to students' achievement or the effectiveness of their performance in teaching. In the other word, the teacher can get information about how well students have mastered the courses they have just learned. ${ }^{2}$ It shows that the test has a big role in education for the students and also the teachers. More the teachers know the

[^0]information about the students' learning achievement; the teachers will be able to develop their teaching performance more and more.

The good test is important for the students because this activity can describe students learning result and teachers will know whether or not the students reach the education's goal. Stufflebeamm defined:
"Evaluation is the process of delineating, obtaining, and providing useful information for judging decision alternatives". ${ }^{3}$

The evaluation draws how well students achieve the materials after teaching learning process. Researcher argue that English teacher has to must be able to design good test according to the principles of assessment. The principles are the criteria which always become a consideration to make a good test for a test-maker. As Combe et al's book said that there are 3 kinds of the criteria of the good test, those are validity, reliability, and practicality. ${ }^{4}$

Drawing from the definition from Carol Chapelle and Geoff Brindley, assessment is the act of collecting information and making judgments about a language learner's knowledge of a language and ability to use it. It can be understood that the information of evaluation will be very useful to make judgments of the students, either about their totality achievement. Thus, the teachers must be able to design the qualified test based on the principles, mechanism, and procedures of language testing assessment. However, this research is going to focus on the principles of language testing assessment.

[^1]A test made by teachers should be in line with the syllabus, and the content of the test must be able to measure what is intended to measure, especially for language skill taught by English teachers. In discussing the validity, the validity of a test is the extent to which a test measures what is intended to measure. Without validity, there can be no confidence in the inferences and conclusions made from the results. ${ }^{5}$ Then, the validity is one of principles which has prominent role in assessment, it can be seen from the content of validity that is the test made by the teachers as the main examiner must be able to measure student's ability.

Based on the Areta Wulan Dari experience when she did a teaching practice at Al- Amanah Junior High School, she corrected students' answer sheet on the summative test. Areta found that there are so many students answered incorrectly on the same certain numbers of summative test questions. Based on students' confession, it happened because the test items' materials that existed on the summative test have not explained yet by their English teacher. Therefore, the students have not got some knowledge needed. It will make student is enable to answer the question in the test. This condition showed that there was a problem in that test. The reason why the researcher wants to analyze the standardization of the objective test at SMAN 3 of Palopo to find out the proof related the test items at the even semester of SMAN 3 of Palopo has the good standardization of English objective test based on the principles of language testing assessment.

[^2]In addition, the test made by English teacher have to appropriate with the criterion validity because through knowing the criteria of the test item, the teacher be able to know which items are valid, invalid, revise, or even rejected. According to Douglas Brown, the five major principles of language assessment consisted of practicality, reliability, validity, authenticity, and washback. ${ }^{6}$ According to Zainal Arifin, the good instrument has eight major characteristics those are validity, reliability, and relevant, representative, practicality, discriminative, specific, and reasonable. ${ }^{7}$

As Areta said when a instrument is not valid, the consequences for the students are they cannot demonstrate skills that they posses if they are not tested; irrelevant items are presented that the students will likely answer incorrectly only because the content was not taught by the teacher; ${ }^{8}$ and if the test does not cover the standard of qualified test, the instrument cannot measure the students' ability. For the reason above, the researcher thought that it was strongly important to analyze the standardization of the test. Therefore, the researcher would do research on the multiple-choice test made by English teachers at SMAN 3 of Palopo through research entitles "the standardization of English teachers-made objective test at SMAN 3 Palopo".

[^3]
## B. Problem Statement

Based on the explanation in the background above, the researcher formulated the problem statement as follows:
"How is the standardization of English teachers-made objective test at SMAN 3 Palopo?"

## C. Objective of the Research

The objective of this research was:
"To find out the standardization of English teachers-made objective test at SMAN 3 Palopo"

## D. Significances of the Research

1. For teacher, by finding the standardization of objective test, the teachers are able to know the standardization of their test and can improve the test quality based on the principles of language testing assessment.
2. For the students, if the standardization of the test is not good, the teachers are able to correct the test and for the next exam, it will help the students to achieve the good score in the future.
3. For other researchers, it is hoped that this thesis can be one of references for the next researchers who are interested in developing similar research.

## E. Scope of the Research

The scope of the research restricted to know how the standardization of objective test especially multiple-choice test by analyzing the English teachersmade objective test at the even semester at SMAN 3 of Palopo. The principles of language testing assessment consisted of the item validity, internal reliability, item difficulties and discrimination power. In addition, the researcher would like to make use of the blueprint by the English teacher.

## F. Definition Of Term

1. Item Validity is measure precision of an item of the test in measuring what the test wanted to measure through the item of the test itself.
2. Internal Reliability is the reliability of the test found by analyzing the data only held once.
3. Principle is some truth criteria that become the main of thinking, acting, and so forth.
4. Language Testing is all about building better tests, researching how to build better tests and, in so doing, understanding better the things that we test"
5. Blueprint is delineation before the teacher construct the instrument for $1^{-}$ students. The blueprint is a table used as orientation in designing and constructing the test.

## CHAPTER II

## LITERATURE REVIEW

This chapter deals with some previous related findings, some pertinent ideas that consist of : (1) language testing, (2) assessment, (3) test, (4) qualified test, (5) the principles of the better multiple-choice test, (6) item difficulties, and (7) discrimination power.

## A. Previous Studies

Review of the previous research is made in order to avoid replication. This research is intended to know the standardization of English teachers-made objective test based on the principles of language testing assessment. Another research has been conducted to find the teacher's competence in evaluating and designing test. The first, a research conducted by Endah Putri Novi Arti, in "Kemampuan Guru Mata Pelajaran Biologi dalam Pembuatan Soal Hot (Higher Order Thinking) di SMA Negeri 1 Wonosari Klaten" found that the test made by the teachers at SMAN 1 Wonosari Klaten was not appropriate by the criteria in designing test. The result of the research done by Rahmani proved that the item difficulties were $40 \%$ difficult, $55 \%$ medium and $5 \%$ was easy. ${ }^{9}$

Research by Endang Asriyanti Amin Sikki et al, entitled "The Competence of Primary School English Teachers in Indonesia", found that the test items which are most frequently wrong done by teachers. She also concluded that the competence of English teachers in primary school in Indonesia need

[^4]improvement. Their professional and pedagogic competences need well preparing. ${ }^{10}$

Research by Areta Wulan Dari, entitled "An Analysis On The Content Validity Of English Summative Test Items At The Even Semester Of The Second Grade Of Junior High School" shows that: the English summative test of the even semester on the second grade students of Junior High School of Al-Amanah had bad content validity. Almost $49 \%$ indicators in the test items are not in line with the syllabus. Besides that the indicator of reading dominates almost all the items and the indicator of writing only one item in essay form. ${ }^{11}$

Next research was from Arif Purnomo, which entitled of "Kemampuan Guru dalam Merancang Tes Berbentuk Pilihan Ganda Pada Mata Pelajaran IPS untuk Ujian Akhir Sekolah (UAS)". He found that most of the tests were not used because the test broke validity, reliability, item difficulties and discrimination power. ${ }^{12}$

According to the previous studies above, the result of their research were mostly similar by using the descriptive analysis technique and the results were not

[^5]too different. Most of their research showed that the validity of the test or instrument was not good. While this research analyzed the standardization of English teachers made multiple-choice test at SMAN 3 of Palopo by using the quantitative analysis. In this research, the researcher also used the blueprint for checking the test item conformity with the teachers' blueprint. In addition, the researcher used the different method for looking the reliability of the multiple choice test, it was Split-Half method than used the Spearman-Brown formula.

## B. Theoretical Review

## 1. Definition of Assessment

According to Djemari Madrapi, assessment is an act to describe the result of measuring. ${ }^{13}$ According to Terry Overton, assessment is a process of gathering information to monitor progress and make educational decisions of necessary. As noted in my definition of test, an assessment may include a test, but also include methods such as observations, interview, behavior monitoring, and so forth. ${ }^{14}$

Bob Kizlik also stated that the assessment is a process by which information is obtained relative to some known objective or goal. Assessment is a broad term that includes testing. A test is a special form of assessment. Test is assessments made under contrived circumstances especially so that they may be

[^6]administrated. In other words, all tests are assessments, but not all assessments are tests. ${ }^{15}$

In education, according to Brown \& Abeywickrama measurement is "the process of quantifying the observed performance of classroom learners". Assessment, as Brown and Abeywickrama added, is an ongoing process including a wide range of techniques such as simply making an oral appraisal of a student's response or jotting down a phrase to comment on a student's essay. ${ }^{16}$

## 2. Definition of Language Testing

Testing and assessment are part of modern life. Schoolchildren around the world are constantly assessed, whether to monitor their educational progress, or for governments to evaluate the quality of school systems. Adults are tested to see if they are suitable for a job they have applied for, or if they have the skills necessary for promotion. Entrance to educational establishments, to professions and even to entire countries is sometimes controlled by tests. Tests play a fundamental and controversial role in allowing access to the limited resources and opportunities that our world provides. The importance of understanding what we test, how we test and the impact that the use of tests has on individuals and societies cannot be overstated. Testing is more than a technical activity; it is also an ethical enterprise.

[^7]The practice of language testing draws upon, and also contributes to, all disciplines within applied linguistics. However, there is something fundamentally different about language testing. Language testing is all about building better tests, researching how to build better tests and, in so doing, understanding better the things that we test. ${ }^{17}$
3. Test
a. Definition of Test

Test is writing, speaking, or interview examination to know the ability, talents, or personality. ${ }^{18}$ Generally, test is used to increase the learning to measure the aspects of human behavior such as knowledge aspect (cognitive), behavior aspect (affective) and ability aspect (psychomotor). ${ }^{19}$

According to the language, test is an examination or trial. Whereas according to the terminology by Anne Anastasi in her writing entitled "Psylogical Testing ". Test is tester that has objective standard and can be used widely as soon as truly can be used to measure and compare the behavior and individual psychological condition. ${ }^{20}$

[^8]Regarding this, Airasian and Russell also explain "Tests are composed of short communications called questions or items". ${ }^{21}$ Through the test, the teachers can obtain the information about the successful or not the students in mastering the aims (standard competency, basic competency, and indicator) have decided in curriculum. By the test, the teachers can also know the students knowledge and analyze the or not the learning that has been done. The result of the test becomes the report for the certain parties about the development and learning progress of students' nor although about the teachers successful in teaching.

According to Anas Sudjono, the test must be held because the test has two functions, they are: as the students tester to measure the development or progress that has been reached by the students after doing the learning process and as the tester of the successful teaching program, because through the test will be known how far was the teaching program has been reached. ${ }^{22}$

According to Ngalim Purwanto the principles and teaching evaluation technique in a detail manner the function of the test divided by four functions, they are : to know the development, successful and progress of the students after doing the learning process in certain period of time; to know the successful learning program. In learning, the teaching process is a system that consists of some connecting components. The components are aims, material or teaching tools, method and learning activity, instrument and teaching resource, and

[^9]procedure and evaluation instrument; as guidance and Counseling Necessary (BK); and as development and improvement of curriculum necessary. ${ }^{23}$

Based on some definitions above, the researcher can conclude the test into three definitions. First, the test is a standardize device to measure the students' knowledge achievement about the subject after teaching-learning process. Second, it is one of the ways to help the teachers in measuring the goal of achieving the learning objective. The last, a test is also a systematic procedure to get more information about students' certain characteristic.

## b. Definition of Quality

Quality is good or bad a level, standard, or rank of something such as cleverness, brightness, splendour and so forth. Generally, the quality is defined as comprehensive illustration and characteristic of commodity or merit that show the capability in satisfying the necessary.

Suryosubroto writes that quality means that something has superiority level form of commodity or merit, and tangible or intangible. Tangible quality means that something can be seen from the activity and behavior for example a hand phone has good power, the picture's color is clear, the sound is good, and so on. Whereas intangible quality cannot be seen but can be sense such as solidarity, discipline, cleanness, and so forth.

Edward \& Sallis say the definition of quality also can be seen from the absolute and relative concept. In absolute concept, something (commodity) mentioned as a qualified when fulfill the highest and perfect requisite.

[^10]
## c. Kinds of Test

There are some kinds of the test, according to Suharsimi Arikunto kinds of the test can be divided by two kinds they are:

1. Subjective test

## 2. Objective test ${ }^{24}$

The type of subjective test generally essay. Essay is the type of the test that needs more discussion. Objective test is type of test which can be done objectively in examination. This case is intended to overcome the lack of the essay test. Some kinds of objective test are true false, multiple-choice and matching.

In this research, the researcher will focus on the objective test related to the analysis the standardization of multiple choice test based on the principles of language testing assessment. Meanwhile, to understand the kinds of test made by the teachers, the researcher delivers what the multiple-choice is.

Multiple-choice test is a type of the test that has the right one answer. In terms of its structure, the multiple-choice consists of:
a. Stem, question or statement that contain of the problem
b. Option, some choices as answer alternative.
c. Key, the correct answer.
d. Destructor, the answer except the correct answer. ${ }^{25}$

[^11]Brown \& Hudson stated that multiple choices are the type of assessment that requires students to choose a correct answer among several options provided. Multiple-choice assessments have lower guessing factors than true-false, and they also are suitable for measuring a relatively wide variety of various kinds of precise learning points.

A standard multiple-choice test item consists of two basic parts: a problem (stem) and a list of suggested solutions (alternatives). The stem may be in the form of either a question or an incomplete statement, and the list of alternatives contains one correct or best alternative (answer) and a number of incorrect or inferior alternatives (distracters). The purpose of the distracters is to appear as plausible solutions to the problem for those students who have not achieved the objective being measured by the test item. Conversely, the distracters must appear as implausible solutions for those students who have achieved the objective. Only the answer should appear plausible to these students.

## d. The Principles of the Better Multiple-Choice Test

A test can be mentioned as a qualified test as a tester if the test fulfill the rules and regulation of the test, they are:
a. Validity
b. Reliability
c. Objectivity
d. Practicality

## e. Economic ${ }^{26}$

According to Mudjijo there are 4 the criterion of the good test, those are validity, reliability, practicality, economic and the last is test analysis. ${ }^{27}$ A test can be regarded as a good one, if it fulfills some of characteristic of a good test. Harris in his book Testing English as a second language stated all good tests possess three qualities; validity, reliability, practicality. ${ }^{28}$

Fundamental principles for evaluating and designing second language assessment include validity, reliability, practicality, equivalency, authenticity, and washback. ${ }^{29}$ There are three common criteria which always become a consideration to make a good test for a test-maker based on Farhady in Coombe et al's book ${ }^{30}$ :
a. Validity

In general, it takes much longer to respond to an essay test question than it does to respond to a multiple-choice test item, since the composing and recording of an essay answer is such a slow process. A student is therefore able to answer many multiple-choice items in the time it would take to answer a single essay question. This feature enables the teachers using multiple-choice items to test a

[^12]broader sample of course content in a given amount of testing time. Consequently, the test scores will likely be more representative of the students' overall achievement in the course. ${ }^{31}$ According to Gronlund, validity is the extent to which inferences made from assessment result are appropriate, meaningful, and useful in terms of the purpose of the assessment. ${ }^{32} \mathrm{~A}$ test is considered valid when it reflects the test-takers' ability in a particular area and the test does not measure anything else. Validity is a complex concept in testing, but Brown and Abeywickrama seemed to have well encapsulated the main attributes of validity. They indicated that in order to achieve validity a test should: measure only what it claims to measure; not measure anything else; rely as much as possible on empirical evidence; involve performance that samples the test criterion; offer meaningful and useful information about a test-taker's ability; and be supported by a theoretical rationale.

Moreover, there are more explanations about a validity which defined by Gronlund; like:
a. Validity refers to the result of a test or evaluation instrument for a given group of individuals, not to the instruments itself. Test makers sometimes speak the validity of the test, for the sake of the convenience, but it is more appropriate to speak of the validity of the test result, or more special, of the validity of the interpretation to be made from the result.

[^13]b. Validity is a matter of degree. It does not exist in an all or none basis consequently; test makers should avoid thinking of evaluation results as valid or invalid. Valid is best considered in terms of categories that specify degree, such as high validity, moderate validity, and low validity.
c. Validity is always specific to some particular use. It should be never considered a general quality. ${ }^{33}$

Regarding Scarvia B. Anderson et al state that a test is valid if it measures what it purpose to measure. ${ }^{34}$ The kinds of validity are: (1) content validity is how well the test constructs as representative as the subject matter which should be covered in the test. It aims for measuring what should be measured as in syllabus and curriculum. As one of experts defines "Content validity is concerned with the extent to which the test is representative of a defined body of content consisting of topics and processes". ${ }^{35}$ (2) Criterion validity of a test is a relationship or a correlation between the test scores and scores on some measures which represent an identified criterion.

Similarly, Gronlund says "Criterion validity may be defined as the extent to which the performance is related to some other valued measure of performance". ${ }^{36}$ Besides, whenever the test scores are to be used to predict future

[^14]performance or to estimate current performance on some valued measure other than the test itself, it is called criterion validity. ${ }^{37}$ (3) Face validity is closely related to a surface or appearance of test. As Alderson et al., says that face validity refers to the credibility or public acceptability of the test surface. ${ }^{38}$ Moreover, Heaton defines "If a test item looks right to other testers, teachers, moderators, and testers, it can be described as having at least face validity". ${ }^{39}$

From the definition above, Shaumi assumes that face validity means the test appearance which is readable, acceptable, and appropriate with what supposed to test. ${ }^{40}$ (4) Hopkins and Antes says "Construct validity is an indication of the relationship between what a theory predicts and what test scores how". ${ }^{41}$ As Heaton also states, "If the test has construct validity it is capable of measuring certain specific characteristics in accordance with a theory of language and behavior and learning", ${ }^{42}$ This type of validity assumes the existence of certain learning theories or constructs underlying the acquisition of abilities and skills.

[^15] 1998, p. 161.

Another opinion from Khodirin, he stated in his research that the test designer should concern more to the content validity in arranging a good test. To arrange a test should be based on the curriculum and syllabus. ${ }^{43}$

Figure.01: TEST VALIDITY AND ITEM VALIDITY ${ }^{44}$


This research, the researcher chose the item validity to be analyzed. The item validity of the test is measure precision of an item of the test in measuring what the test wanted to measure through the item of the test itself. ${ }^{45}$

[^16]b. Reliability

A test is considered reliable if it is administered on different occasions and similar results are obtained. Gronlund says "reliability refers to the consistency of evaluation results, if the test-makers obtain quite similar scores when the same test administered to the same group on the different occasion. Then, it can conclude that the result has a high degree of reliability from one occasion to another. Similarly, if the teachers independently rate the same student in the same instrument and obtain the similar ratings, it can conclude that the result has a high degree of reliability". ${ }^{46}$ Likewise, Allison claims "The reliability of a test concerns the accuracy and trust worthiness of it is results: if we could erase the test from students' memories and then repeat it, how similar would the results be? ${ }^{47}$

Brown and Abeywickrama suggested the following ways to ensure that a test is reliable: it is consistent in its conditions across two or more administrations; it gives clear directions for scoring or evaluation; it has uniform rubrics for scoring or evaluation; it lends itself to consistent application of those rubrics by the rater; and it contains items or tasks that are unambiguous to the test-takers.

Well-written multiple choice test items compare favorably with other test item types on the issue of reliability. They are less susceptible to guessing than are true-false test items, and therefore capable of producing more reliable scores.

[^17]Their scoring is more clear-cut than short answer test item scoring because there are no misspelled or partial answers to deal with. Since multiple-choice items are objectively scored, they are not affected by scorer inconsistencies as are essay questions and they are essentially immune to the influence of bluffing and writing ability factors, both of which lower the reliability of essay can test scores. As a result, a test is considered by reliability if the test-makers get some result repeatedly. Reliability does not simply validity. It means that a reliable measures the subjects or materials given consistently, but not necessarily what it is supposed to be measured. ${ }^{48}$

Those are some methods can be used to find the reliability of the multiple choice test. See the table 1 below:

Table 1: RELIABILITY METHODS ${ }^{49}$

| Reliable Types | Procedure |
| :--- | :--- |
| Test-retest methods (stability) <br> Product Moment dan Kolerasi Intra <br> Kelas | The test is given twice with the same <br> students in the different time then <br> decide the correlation. |
| Parallel Equivalent: <br> Product Moment dan Kolerasi Intra <br> Kelas | Test is given twice with the same <br> students in time is not too long (ex. 2 <br> weeks), correlate the scores for looking <br> the reliability. |
| Split-Half methods (Belah dua) <br> Persamaan Split-Half dan Spearman- <br> Brown | The test is given once then devide it by <br> using the equation to correlate both of <br> the scores. |

[^18]
## Internal Consistency:

- Koefisien Alpha
- Kurder-Richardson (KR-20)
- Kuder-Richardson (KR-21)
- Test is given once, using equation
- Test is given once, using equation
- Test is given once, using equation

From the explanation on the table above, it has been explained clearly that those methods can be used to facilitate us to decide the reliability of the test. Next, in this research, the researcher will analyze the reliability of the test by using the split-half method. The criteria of reliability is revolve of $0-1$. If the coefficient of the reliability (near to 1 ), the more high consistency and the precision of the test.

## c. Practicality

Brown \& Abeywickrama stated that practicality refers to the logistical, practical, and administrative issues involved in the process of constructing, administering, and rating an assessment instrument. Bachman and Palmer, on the other hand, defined practicality as:
"The relationship between resources will be required in the design, development, and use of the test and the resources that will be available for these activities."

Bachman and Palmer also added that practicality refers to the extent to which the demands of test specifications can be met within the limits of existing resources such as human resources (test writers, raters, or proctors), material resources (space, equipment, or materials), and time. ${ }^{50}$

Therefore, Practicality is the third criteria of a good test which concerns in

[^19]cost, the time, and the ease in administering the test. If the test is expensive, difficult to be scored, and time consuming; it means the test is impractical. ${ }^{51}$

## d. Item Difficulties

Arikunto stated that "the test has the good difficulties index which is not too easy and difficult". ${ }^{52} \mathrm{~A}$ test mentioned as easy test if a most of the students able to answer the question correctly and difficult if the most of the students cannot answer the questions correctly.

Good multiple-choice test items are generally more difficult and timeconsuming to write than other types of test items. Coming up with plausible distracters requires a certain amount of skill. This skill, however, may increase through study, practice, and experience. In constructing good objective test items requires a great deal of time and effort. Before the test items are used, it is necessary to identify which items are answered correctly by the more able students taking the test and badly by the less able students. The identification of certain difficult items in the test, together with the knowledge of the performance of the individual distracters in multiple-choice items, can prove just as valuable in its implications for teaching as for testing.

[^20]All items should be examined from the point of view of their difficulty level and their level of discrimination as well as the distracters for multiple-choice test items.

## e. Discrimination Power

According to Arikunto, the discrimination power is the ability of a matter to distinguish between the upper students and the lower students. If the test could be answered by the upper group as well lower students, it means the test is not good because the test item has no power differentiator. Then, it could be said that test with the considerable distinguishing between clever students (high-ability) and the students low ability. The negative score of discrimination power showed that the test did not work out.

Discrimination power is the competence of the test to discriminate between the high students and the low students. The number which shows the level of discrimination power mentioned as discrimination index. Similar with the difficulty index, the discrimination index number start from 0.00 until 1.00. But the difference is the discrimination index use the negative sign (-). The negative sign used if the test shows the quality of the testees. Those are the students' high skill and low skill in answering the test. The three points on discrimination power are:


When the high students and low students are able to answer a test correctly, the test means not good because the test do not have discrimination power. ${ }^{53}$

## C. Conceptual Framework

The concept of standardization of objective test especially multiple choice test based on the principles of language testing assessment has been explored in the previous discussion. A conceptual framework derived from those concepts above is presented as follows.

In pedagogic competence, one of competences the teachers should have is arrange the instrument in order to measure the students' ability. The teachers prepare the assessment for the students to know the development, progress of the students after doing the learning process in certain period of time and the successful learning program. In learning, the teaching process is a system that consists of some connecting components, such as aims, material or teaching tools, method and learning activity, instrument and teaching resource, and procedure and evaluation instrument.

Regarding this, the test made by teachers should be designed correctly congruent with the theory, mechanism, and principles of language testing assessment.

[^21]Figure.02: Conceptual framework:


## D. Hypothesis

Based on the problem statement and conceptual framework, the hypothesis in this research was: "the standardization of English teachers-made objective test at SMAN 3 Palopo is strongly good".

## CHAPTER III

## RESEARCH METHOD

## A. Research Method

The research revealed the data or information of the standardization of English teachers-made objective test at SMAN 3 Palopo with the result that this research is quantitative research.

The researcher chose this research, because it provided a method that done by the researcher related to know the standardization of English teachers-made objective test based on the principles of language testing assessment by studying issues of problem the researcher face, especially in assessment. This research also supported by qualitative analysis because the researcher described the standardization of the test and more information about teachers' documentation.

## B. The Participants of the Research

The researcher decided the data resource in this research was the test made by English teachers. The population in this research was the students' test at first and second year in SMAN 3 Palopo. The English teacher at SMAN 3 of Palopo consists of 1 teacher in the first year and 1 teacher in the second year, so there were 2 teachers totally. The researcher would obtain the data from the teachers for finishing this research completely.

## C. Instrument of the Research

There were two instruments of the data collection, those were:

1. Documentation

Documentation was one of the important data collections in this research. The documentation record consisted of English multiple-choice test papers; students' answer sheets, answer key, and the blueprint made by English teachers at SMAN 3 Palopo.
2. Interview

In this research, the researcher used semi-structured interview. The researcher prepared some questions for English teachers at SMAN 3 of Palopo related to the constructing of the test. In addition, the interview is administered in getting the explanation from the English teachers about the constructing of the objective test. Besides, the researcher would get the information whether the English teachers have understood the important of the good items in constructing the multiple-choice test.

## D. Data Collection Technique

1. At the first stage, the researcher was collecting the English multiple choice test and the blueprint of SMAN 3 of Palopo.
2. Secondly, the using of checklist table is purposed to check and analyze the number of the test which has been answered correctly or incorrectly by the
student. The right answer given 1 score and for the wrong answer got 0 score. This analysis called analysis item. ${ }^{54}$
3. The last, the interview is conducted for getting a supporting data by asking about the phenomena related to the topic.

## E. Data Analysis Technique

The research used quantitative analysis. The quantitative analysis was using the formula which the result be processed and appropriated with the theory to analyze the test they were validity, reliability, item difficulties, and discrimination power. To find out the validity of the test, the researcher used Microsoft Excel application for helping the researcher found the validity of the test easily.

Special in analyzing the reliability of the tests, the researcher used the Split-Half Method. ${ }^{55}$

## 1. Validity Formula

The Draw of the validity according to Areta on her thesis was if the testmaker wanted to measure the students' writing ability, he or she could ask the students to write as many words as they could in fifteen minutes, then simply count the words for the final score. However, if the test-maker wanted to measure the students' ability in speaking, he or she used an objective test or an essay test.

[^22]It meant that he or she did not measure what should be measured. The writer emphasizes that validity formed the important good criteria of a good test refers to the test which measure what should be measured or intended. ${ }^{56}$

To find out the validity of the objective test, the researcher quantitative technique by using the formula as follows:

$$
r_{p b i}=\frac{M_{p}-M_{t}}{S D_{t}} \sqrt{\frac{p}{q}}
$$

$r_{p b i}=$ Point bi-serial Correlation Coefficient, i.e. item validity coefficient
$M_{p}=$ Mean score of testers correctly answering the analyzed item
$M_{t}=$ Mean score of the total score
$S D_{t}=$ Standard deviation of the total score
p = Proportion of testees correctly answering the analyzed item
$\mathrm{q}=$ Proportion of testees incorrectly answering the analyzed item.
For helping the researcher analyzed the item validity, the researcher used the Microsoft Excel Application used =CORREL(array1;array2) formula. This Microsoft Excel formula is used specifically for finding out the $\boldsymbol{r}_{\boldsymbol{h i t u n g}}$ of validity.

## 2. Reliability Formula

To calculate the reliability, the researcher used the formula of Pearson product moment correlation as follows:

[^23]\[

$$
\begin{array}{ll}
r_{x y}= & \frac{N \sum x y-\left(\sum x\right)\left(\sum y\right)}{\sqrt{\left[N \sum x^{2}-\left(\sum x\right)^{2}\right]\left[N \sum y^{2}-\left(\sum y\right)^{2}\right]}} \\
r_{x y} & =\text { Pearson product moment correlation between variables } \mathrm{x} \text { and } \mathrm{y} \\
N & =\text { number of students taking the test } \\
\sum x & =\text { sum of variable } \mathrm{x} \\
\sum y \quad & =\text { sum of variable } \mathrm{y} \\
\sum x y & =\text { sum of multiplication of variable } \mathrm{x} \text { and variable } \mathrm{y} \\
\sum x^{2} \quad & =\text { sum of square } \mathrm{x} \\
\sum y^{2} & =\text { sum of square } \mathrm{y}
\end{array}
$$
\]

After finding out the product moment correlation, the researcher used Spearmen-Brown formula: ${ }^{57}$

$$
r_{11}=\frac{2 x r_{1 / 21 / 2}}{\left(1+r_{1 / 21 / 2}\right)}
$$

$r \frac{1}{2} \frac{1}{2}=$ Correlation among scores in every test
$\boldsymbol{r}_{\mathbf{1 1}}=$ Instrument reliability

## 3. Item difficulty formula

To find out the item difficulty of the tests, the researcher used the formula as follows:

$$
I F=\frac{U G+L G}{N}
$$

[^24]
## 4. Discrimination power formula

To find out the discrimination power of the tests, the researcher used the formula as follows:

$$
I D=\frac{U G-L G}{n}
$$

IF = index of facility;
ID = index of discrimination;
$\mathrm{n}=$ number of students in one group $(1 / 2 \mathrm{~N})$;
$\mathrm{UG}=$ frequency of score by upper group
$\mathrm{LG}=$ frequency of score by lower group

## CHAPTER IV

## RESEARCH FINDINGS AND DISCUSSION

## A. Findings

## 1. Data Description and Quantitative Analysis

## a. Test Description of First Year Students

The researcher analyzed the standardization of multiple-choice English teacher made test at SMAN 3 Palopo. There were 31 students in the class and the multiple-choice test consisted of 34 numbers and 5 answer choices (a, b, c, d and e). The questions were divided into 4 sections (listening, reading, grammar, and vocabulary). The test was given at students in the first year at SMAN 3 Palopo. The test was held on June $4^{\text {th }}$, 2018 with the total time given to the students for answering the whole items was 90 minutes.

## Table 2: The Score Rubric

In scoring rubric the researcher used the following formula:

$$
\text { Score }=\frac{\text { number of correct answer }}{\text { number of questions }} \times 100
$$

| Number of <br> correct answer | Score |
| :---: | :---: |
| 1 | 3 |
| 2 | 6 |
| 3 | 9 |
| 4 | 12 |
| 5 | 15 |
| 6 | 18 |
| 7 | 21 |
| 8 | 24 |
| 9 | 27 |


| 10 | 30 |
| :---: | :---: |
| 11 | 33 |
| 12 | 36 |
| 13 | 39 |
| 14 | 42 |
| 15 | 45 |
| 16 | 48 |
| 17 | 51 |
| 18 | 54 |
| 19 | 57 |
| 20 | 60 |
| 21 | 63 |
| 22 | 66 |
| 23 | 69 |
| 24 | 72 |
| 25 | 75 |
| 26 | 78 |
| 27 | 81 |
| 28 | 84 |
| 29 | 87 |
| 30 | 90 |
| 31 | 93 |
| 32 | 96 |
| 33 | 99 |
| 34 | 100 |

## 2. Analysis

In this part of research findings, the researcher presented the imaginary scores of a class of 31 students on a test consisting of 34 items on the following table. The table contained a frequency distribution showed the number of students who obtained each mark awarded; tallies that was representing the number of students obtaining the same scores; the frequency and the percentage of each score on the multiple-choice test.

Table 3: The Frequency Distribution of Scores

| No. | Raw <br> Score | Final <br> Score | Tally | Frequency | Percentage <br> $(\%)$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 28 | 84 | $/ / / / / /$ | 6 | 19.35 |
| 2. | 27 | 81 | $/ / / / / /$ | 3 | 9.67 |
| 3. | 26 | 78 | $/ / / / / / /$ | 8 | 25.80 |
| 4. | 25 | 75 | $/ / / /$ | 2 | 6.45 |
| 5. | 24 | 72 | $/ / / /$ | 5 | 16.12 |
| 6. | 23 | 69 | $/ /$ | 2 | 6.45 |
| 7. | 22 | 66 | $/ /$ | 2 | 6.45 |
| 8. | 21 | 63 | $/$ | 1 | 3.22 |
| 9. | 18 | 54 | $/$ | 1 | 3.22 |
| 10. | 12 | 36 | $/$ | 1 | 3.22 |
| $\Sigma$ | Total |  |  |  |  |

To make the percentage, the researcher used the formula:

$$
P=\frac{f}{n} x 100 \%
$$

$\mathrm{P}=$ Percentage of Content Validity
$\mathrm{f}=$ Frequency of item appearance
$\mathrm{n}=$ Number of sample

The distribution of the scores illustrated above can be presented in another way as in the following frequency polygon:

A. Mean Score \& Standard Deviation
1). Measures of Central Tendency

There are three ways of measuring central tendency, mode, median, and mean, of which the mean is the most efficient measure.

Table 4: The Frequency Distribution of Scores

| No. | $\mathbf{X}$ | $\mathbf{F}$ | $\mathbf{F x}$ |
| :---: | :---: | :---: | :---: |
| 1 | 8.4 | 6 | 50.4 |
| 2 | 8.1 | 3 | 24.3 |
| 3 | 7.8 | 8 | 62.4 |
| 4 | 7.5 | 2 | 15 |
| 5 | 7.2 | 5 | 36 |
| 6 | 6.9 | 2 | 13.8 |
| 7 | 6.6 | 2 | 13.2 |
| 8 | 6.3 | 1 | 6.3 |
| 9 | 5.4 | 1 | 5.4 |
| 10 | 3.6 | 1 | 3.6 |
| Total | $\mathbf{6 7 . 8}$ | $\mathbf{3 1}$ | $\mathbf{} \mathbf{} \mathbf{F X}=\mathbf{2 3 0 . 4}$ |

$$
X=\frac{\Sigma \mathrm{fX}}{\mathrm{~N}}=\frac{230.4}{31}=7.4
$$

From the table above, could see that in this particular case there is a fairly close correspondence among the mode (7.8), median (7.0), and mean (7.4).
2). Measures of Dispersion

The measure of dispersion is related to the range or spread of scores. The mean by itself enable us to describe an individual students' score by comparing it with average set of scores obtained by a group.

Table 5: Standard Deviation

| No. | X | D | $\mathrm{d}^{2}$ |
| :---: | :---: | :---: | :---: |
| 1 | 8.4 | 1 | 1 |
| 2 | 8.4 | 1 | 1 |
| 3 | 8.4 | 1 | 1 |
| 4 | 8.4 | 1 | 1 |
| 5 | 8.4 | 1 | 1 |
| 6 | 8.4 | 1 | 1 |
| 7 | 8.1 | 0.7 | 0.49 |
| 8 | 8.1 | 0.7 | 0.49 |
| 9 | 8.1 | 0.7 | 0.49 |
| 10 | 7.8 | 0.4 | 0.16 |
| 11 | 7.8 | 0.4 | 0.16 |
| 12 | 7.8 | 0.4 | 0.16 |
| 13 | 7.8 | 0.4 | 0.16 |
| 14 | 7.8 | 0.4 | 0.16 |
| 15 | 7.8 | 0.4 | 0.16 |
| 16 | 7.8 | 0.4 | 0.16 |
| 17 | 7.8 | 0.4 | 0.16 |
| 18 | 7.5 | 0.1 | 0.01 |
| 19 | 7.5 | 0.1 | 0.01 |
| 20 | 7.2 | -0.2 | 0.04 |
| 21 | 7.2 | -0.2 | 0.04 |
| 22 | 7.2 | -0.2 | 0.04 |
| 23 | 7.2 | -0.2 | 0.04 |
| 24 | 7.2 | -0.2 | 0.04 |
| 25 | 6.9 | -0.5 | 0.25 |
| 26 | 6.9 | -0.5 | 0.25 |
| 27 | 6.6 | -0.8 | 0.64 |
| 28 | 6.6 | -0.8 | 0.64 |
| 29 | 6.3 | -1.1 | 1.21 |
| 30 | 5.4 | -2 | 4 |
| 31 | 3.6 | -3.8 | 14.44 |
| Total | 230.4 | 1 | 30.4 |

a). Range $=84-36=48$
b). Standard deviation

$$
\begin{aligned}
& s . d .=\sqrt{\frac{\sum d^{2}}{N}} \\
& s d=\frac{\sqrt{\mathbf{3 0 . 4}}}{31}=\sqrt{0.9806451}
\end{aligned}
$$

$s d=0.99$

The standard deviation of the data above is 0.99

## 3). Reliability

To calculate the reliability the researcher used the Pearson product moment correlation formula as follows:

$$
r_{x y}=\frac{N \sum x y-\left(\sum x\right)\left(\sum y\right)}{\sqrt{\left[N \sum x^{2}-\left(\sum x\right)^{2}\right]\left[N \sum y^{2}-\left(\sum y\right)^{2}\right]}}
$$

But, before the researcher used the Pearson product moment colleration, the researcher divided the items into two groups X (Odd Items) and Y (Even Items).

Table 6: Split-Half Method

| No. | Students | Odd Items (1,3,5-17) <br> $(\mathbf{X})$ | Even Items (2,4,6-34) <br> $(\mathbf{Y})$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | SS1 | 14 | 13 |  |  |
| 2. | SS2 | 13 | 10 |  |  |
| 3. | SS3 | 13 | 12 |  |  |
| 4. | SS4 | 11 | 15 |  |  |
| 5 | SS5 | 12 | 14 |  |  |
| 6. | SS6 | 15 | 12 |  |  |
| 7. | SS7 | 14 | 13 |  |  |
| 8. | SS8 | 13 | 13 |  |  |
| 9. | SS9 |  |  |  |  |


| 10. | SS10 | 12 | 12 |
| :---: | :---: | :---: | :---: |
| 11. | SS11 | 13 | 13 |
| 12. | SS12 | 12 | 12 |
| 13. | SS13 | 12 | 11 |
| 14. | SS14 | 12 | 10 |
| 15. | SS15 | 12 | 15 |
| 16. | SS16 | 12 | 12 |
| 17. | SS17 | 14 | 14 |
| 18. | SS18 | 14 | 14 |
| 19. | SS19 | 14 | 14 |
| 20. | SS20 | 9 | 11 |
| 21. | SS21 | 5 | 7 |
| 22. | SS22 | 9 | 9 |
| 23. | SS23 | 12 | 12 |
| 24. | SS24 | 12 | 14 |
| 25. | SS25 | 13 | 12 |
| 26. | SS26 | 14 | 12 |
| 27. | SS27 | 13 | 13 |
| 28. | SS28 | 14 | 14 |
| 29. | SS29 | 13 | 13 |
| 30. | SS30 | 13 | 13 |
| 31. | SS31 | 14 | 14 |
|  |  | $\Sigma \mathrm{X}=386$ | $\Sigma \mathrm{Y}=386$ |
| $\Sigma \mathrm{X}=386$ |  |  |  |
| $\Sigma X^{2}=148.996$ |  |  |  |

$\Sigma Y=386$
$\Sigma Y^{2}=148.996$
$\Sigma X Y=148.996$
$r_{x y}=\frac{31 \times 148.996-(386)(386)}{\sqrt{\left(31 \times 148.996-(386)^{2}\right)}\left(31 \times 148.996-(386)^{2}\right)}$
$r_{x y}=\frac{4.618 .876-148.996}{\sqrt{(4.618 .876-148.996)}(4.618 .876-148.996)}$
$r_{x y}=\frac{4.618727}{\sqrt{(4.469 .880)}(4.469 .880)}$
$r_{x y}=\frac{4.618727}{\sqrt{1.9997981}}$
$r_{x y}=\frac{4.618727}{4.471910}$
$r_{x y}=1.03$

From the result of coefficient correlation, the items may be said as valid items if $r_{\text {hitung }}>r_{\text {tabel }}$, because the students in the first year consisted of 31 students, so the $\mathrm{r}_{\text {tabel }}$ is 0.3 with the coefficient correlation criteria as follow:

Table 7: The Criteria of the Reliability Coefficient Correlation ${ }^{58}$

| Coefficient Correlation $\left(\mathrm{r}_{\mathrm{xy}}\right)$ | Level |
| :---: | :---: |
| $0.800-1.000$ | Very High |
| $0.600-0.800$ | High |

${ }^{58}$ Guilford J.P, Fundamental Statistics in Psychology and Education, (New York : McGraw-Hill Book, 1956), p. 145

| $0.400-0.600$ | Enough |
| :---: | :---: |
| $0.200-0.400$ | Low |

After using the Pearson product moment correlation formula, the researcher found that $\mathrm{r}_{\mathrm{xy}}=1.03$. This score showed half of the reliability of the test. So the $\mathrm{r} r_{x y}$ is called $r \frac{11}{22}$ or $r_{\text {odd-even }}$ to find out the reliability of the test. The next step is analyzed using Spearman-Brown odd even model correlation to see the reliability of the test.

$$
\begin{aligned}
& r_{11}=\frac{2 r \frac{11}{22}}{\left(1+r \frac{11}{22}\right)} \\
& r_{11}=\frac{2 \times 1.03}{(1+1.03)} \\
& r_{11}=\frac{2.06}{2.03} \\
& r_{11}=1.01
\end{aligned}
$$

From the result above, the researcher conclude that the calculation $\left(\boldsymbol{r}_{22}^{11}\right)$ is 1.01. build upon the criteria coefficient correlation above, can be said that the coefficient of the test is very high because $1.01>0.3$ and belong to very high category. It showed the evaluated test is highly reliable.
4). Validity

$$
r_{p b i}=\frac{M_{p}-M_{t}}{S D_{t}} \sqrt{\frac{p}{q}}
$$

Table 8: The Criteria of the Validity by Guilford ${ }^{59}$

| Coefficient Correlation ( $\mathbf{r}_{\mathrm{xy}}$ ) | Criteria |
| :---: | :---: |
| $0.800-1.000$ | Very High |
| $0.600-0.800$ | High |
| $0.400-0.600$ | Enough |
| $0.200-0.400$ | Low |
| $0.000-0.200$ | Very Low |

The $r_{p b i}$ of the item number 1 is 0 . It implied the item number 1 is not valid. Found on the $r_{p b i}$, the researcher found the validity of the test in the first year SMAN 3 Palopo had 18 items were valid and 16 items were not valid. It signified only 18 items could measure the expected competency of the teacher and there were 16 items could not measure the expected competency.

[^25]The level of difficulty is an opportunity to answer correctly for each item in ability level which can be showed in index form. The following below is the classification of difficulty level according to Suharsimi Arikunto in Suwarto:

Table 9: The Category and Criteria of the Difficulty Level ${ }^{60}$

| Coefficient | Category | Criteria |
| :---: | :---: | :---: |
| $0.00-0.30$ | (Difficult) | Accepted |
| $0.31-0.70$ | (Middle) | Revised |
| $0.71-1.00$ | (Easy) | Rejected |

Table 10: Item Difficulty

| Item | UG | LG | IF | Category | Criteria |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 15 | 15 | 0.96 | Easy | Rejected |
| 2 | 15 | 15 | 0.96 | Easy | Rejected |
| 3. | 15 | 14 | 0.93 | Easy | Rejected |
| 4. | 0 | 1 | 0.03 | Difficult | Accepted |
| 5. | 12 | 7 | 0.61 | Middle | Revised |
| 6. | 12 | 11 | 0.74 | Easy | Rejected |
| 7. | 14 | 12 | 0.83 | Easy | Rejected |
| 8. | 12 | 10 | 0.70 | Middle | Revised |
| 9. | 15 | 14 | 0.83 | Easy | Rejected |
| 10. | 14 | 11 | 0.80 | Easy | Rejected |
| 11. | 0 | 0 | 0 | Difficult | Accepted |
| 12. | 7 | 5 | 0.38 | Middle | Revised |
| 13. | 15 | 13 | 0.90 | Easy | Rejected |
| 14. | 4 | 5 | 0.29 | Difficult | Accepted |

[^26]| 15. | 0 | 0 | 0 | Difficult | Accepted |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16. | 12 | 12 | 0.77 | Easy | Rejected |
| 17. | 15 | 14 | 0.93 | Easy | Rejected |
| 18. | 7 | 11 | 0.58 | Middle | Revised |
| 19. | 10 | 8 | 0.58 | Middle | Revised |
| 20. | 14 | 11 | 0.80 | Easy | Rejected |
| 21. | 14 | 15 | 0.93 | Easy | Rejected |
| 22. | 14 | 14 | 0.90 | Easy | Rejected |
| 23. | 13 | 13 | 0.83 | Easy | Rejected |
| 24. | 15 | 14 | 0.93 | Easy | Rejected |
| 25. | 15 | 14 | 0.93 | Easy | Rejected |
| 26. | 15 | 13 | 0.90 | Easy | Rejected |
| 27. | 15 | 12 | 0.87 | Easy | Rejected |
| 28. | 15 | 13 | 0.90 | Easy | Rejected |
| 29. | 12 | 11 | 0.74 | Easy | Revised |
| 30. | 13 | 15 | 0.90 | Easy | Rejected |
| 31. | 12 | 13 | 0.80 | Easy | Rejected |
| 32. | 13 | 14 | 0.87 | Easy | Rejected |
| 33. | 6 | 4 | 0.32 | Middle | Revised |
| 34. | 7 | 4 | 0.35 | Middle | Revised |

The table above explained about the difficulty level of each number of the multiple-choice test. On the table above, the level divided to three kinds, are easy, middle, and difficult level. And the criteria divided into three criteria, are accepted, revised and rejected criteria.

The table showed that there were 23 items were in easy level with the rejected criteria, 7 items were in middle level needed to revise and there 4 items were in difficult level are accepted.

## 6). Discrimination Power

Discrimination power is the test ability to discriminate between the high students' ability and the students' low ability. To find out the index of facility and index of discrimination, the researcher used the formula as follow:

$$
\begin{aligned}
& I F=\frac{U G+L G}{N} \\
& I D=\frac{U G-L G}{n}
\end{aligned}
$$

IF = index of facility;

ID = index of discrimination;
$\mathrm{n}=$ number of students in one group $(1 / 2 \mathrm{~N})$;
$\mathrm{UG}=$ frequency of score by upper group
$\mathrm{LG}=$ frequency of score by lower group

In this case, the criteria of discrimination power can be showed on the table as follow:

Table 11: The Criteria of the Discrimination Power

| Coefficient | Category |
| :---: | :---: |
| $>0.3$ | Accepted |


| $0.01-0.29$ | Revised |
| :---: | :---: |
| $<0.01$ | Rejected |

Table 12: The Indices of Facility and Discrimination

| Item | UG | LG | IF | ID | REMARK |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 15 | 15 | 0.96 | 0 | Low $D P$ | Rejected |
| 2 | 15 | 15 | 0.96 | 0 | Low $D P$ | Rejected |
| 3. | 15 | 14 | 0.93 | 0.06 | Low $D P$ | Revised |
| 4. | 0 | 1 | 0.03 | -0.06 | Negative DP | Rejected |
| 5. | 12 | 7 | 0.61 | 0.33 | Low $D P$ | Accepted |
| 6. | 12 | 11 | 0.74 | 0.06 | Low $D P$ | Revised |
| 7. | 14 | 12 | 0.83 | 0.13 | Low $D P$ | Revised |
| 8. | 12 | 10 | 0.70 | 0.13 | Low $D P$ | Revised |
| 9. | 15 | 14 | 0.83 | 0.06 | Low $D P$ | Revised |
| 10. | 14 | 11 | 0.80 | 0.06 | Low $D P$ | Revised |
| 11. | 0 | 0 | 0 | 0 | Low $D P$ | Rejected |
| 12. | 7 | 5 | 0.38 | 0.13 | Low $D P$ | Revised |
| 13. | 15 | 13 | 0.90 | 0.13 | Low $D P$ | Revised |
| 14. | 4 | 5 | 0.29 | -0.06 | Negative $D P$ | Rejected |
| 15. | 0 | 0 | 0 | 0.13 | Low $D P$ | Revised |
| 16. | 12 | 12 | 0.77 | 0 | Low $D P$ | Rejected |
| 17. | 15 | 14 | 0.93 | 0.06 | Low $D P$ | Revised |
| 18. | 7 | 11 | 0.58 | -0.26 | Negative DP | Rejected |
| 19. | 10 | 8 | 0.58 | 0.13 | Low $D P$ | Revised |
| 20. | 14 | 11 | 0.80 | 0.2 | Low $D P$ | Revised |
| 21. | 14 | 15 | 0.93 | -0.06 | Negative $D P$ | Rejected |
| 22. | 14 | 14 | 0.90 | 0 | Low $D P$ | Rejected |
| 23. | 13 | 13 | 0.83 | 0 | Low $D P$ | Rejected |
| 24. | 15 | 14 | 0.93 | 0.06 | Low $D P$ | Revised |
| 25. | 15 | 14 | 0.93 | 0.06 | Low $D P$ | Revised |
| 26. | 15 | 13 | 0.90 | 0.13 | Low $D P$ | Revised |
| 27. | 15 | 12 | 0.87 | 0.2 | Low $D P$ | Revised |
|  |  |  |  |  |  |  |


| 28. | 15 | 13 | 0.90 | 0.13 | Low DP | Revised |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 29. | 12 | 11 | 0.74 | 0.06 | Low DP | Revised |
| 30. | 13 | 15 | 0.90 | -0.13 | Negative DP | Rejected |
| 31. | 12 | 13 | 0.80 | -0.06 | Negative DP | Rejected |
| 32. | 13 | 14 | 0.87 | -0.06 | Negative DP | Rejected |
| 33. | 6 | 4 | 0.32 | 0.13 | Low DP | Revised |
| 34. | 7 | 4 | 0.35 | 0.2 | Low DP | Revised |

From the table above the researcher found that there were 27 items had low discrimination power. 20 items needed to revise and 6 items are rejected, there were 7 items had negative discrimination power are rejected. It showed the 13 items are rejected totally, and 1 item had low discrimination power is accepted.

## 7. Full Item Analysis

The following are Full Item Analysis from no. 1 until no. 50

## ITEM No. 1

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 0 | 0 |
| C* $^{*}$ | 15 | 15 | 30 |
| D | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$I F=\frac{U G-L G}{N}=\frac{30}{31}=0,96$
$I D=\frac{U G-L G}{n}=\frac{0}{15}=0$

## ITEM No. 3

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 0 | 0 | 0 |
| C | 0 | 0 | 0 |
| D $^{*}$ | 15 | 14 | 29 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{30}{31}=0,93 \\
& I D=\frac{U G-L G}{n}=\frac{1}{15}=0.06
\end{aligned}
$$

ITEM No. 2

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B* $^{*}$ | 15 | 15 | 30 |
| C | 0 | 0 | 0 |
| D | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G-L G}{N}=\frac{30}{31}=0.96 \\
& I D=\frac{U G-L G}{n}=\frac{0}{15}=0
\end{aligned}
$$

## ITEM No. 4

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 2 | 3 | 5 |
| B* $^{*}$ | 0 | 1 | 1 |
| C | 12 | 9 | 22 |
| D | 0 | 0 | 1 |
| E | 1 | 1 | 2 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{1}{31}=0.03 \\
& I D=\frac{U G-L G}{n}=\frac{1}{15}=-0.06
\end{aligned}
$$

## ITEM No. 5

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 0 | 1 | 1 |
| C | 2 | 5 | 7 |
| D* | 12 | 7 | 19 |
| E | 1 | 1 | 2 |
|  | 15 | 15 | 30 |

$I F=\frac{U G+L G}{N}=\frac{19}{31}=0.61$
$I D=\frac{U G-L G}{n}=\frac{5}{15}=0.33$

## ITEM No. 7

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 1 | 1 | 2 |
| B* $^{*}$ | 14 | 12 | 26 |
| C | 0 | 1 | 1 |
| D | 0 | 1 | 1 |
| E | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$$
\begin{gathered}
I F=\frac{U G+L G}{N}=\frac{26}{31}=0.83 \\
I D=\frac{U G-L G}{n}=\frac{2}{15}=0.13
\end{gathered}
$$

ITEM No. 6

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 3 | 4 | 7 |
| B | 0 | 0 | 0 |
| C | 0 | 0 | 0 |
| D | 0 | 0 | 0 |
| E $^{*}$ | 12 | 11 | 23 |
|  | 15 | 15 | 30 |

$I F=\frac{U G+L G}{N}=\frac{23}{31}=0.74$
$I D=\frac{U G-L G}{n}=\frac{1}{15}=0.06$

## ITEM No. 8

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 2 | 1 | 3 |
| C* | 12 | 10 | 22 |
| D | 1 | 1 | 2 |
| E | 0 | 2 | 2 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{22}{31}=0.70 \\
& I D=\frac{U G-L G}{n}=\frac{2}{15}=0.13
\end{aligned}
$$

## ITEM No. 9

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 2 | 2 |
| B | 0 | 0 | 1 |
| C | 0 | 0 | 0 |
| D* | 15 | 14 | 26 |
| E | 0 | 1 | 1 |
|  | 15 | 15 | 30 |

$I F=\frac{U G+L G}{N}=\frac{26}{31}=0.83$
$I D=\frac{U G-L G}{n}=\frac{1}{15}=0.06$
ITEM No. 11

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| $A^{*}$ | 0 | 0 | 0 |
| B | 0 | 0 | 0 |
| C | 1 | 3 | 4 |
| D | 14 | 10 | 24 |
| E | 0 | 2 | 2 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{0}{31}=0 \\
& I D=\frac{U G-L G}{n}=\frac{0}{15}=0
\end{aligned}
$$

ITEM No. 10

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A* | 14 | 11 | 25 |
| B | 1 | 2 | 3 |
| C | 0 | 2 | 2 |
| D | 0 | 0 | 0 |
| E | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$I F=\frac{U G+L G}{N}=\frac{25}{31}=0.80$
$I D=\frac{U G-L G}{n}=\frac{1}{15}=0.06$

## ITEM No. 12

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 0 | 0 |
| C | 8 | 10 | 18 |
| D $^{*}$ | 7 | 5 | 12 |
| E | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{12}{31}=0.38 \\
& I D=\frac{U G-L G}{n}=\frac{2}{15}=0.13
\end{aligned}
$$

## ITEM No. 13

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A $^{*}$ | 15 | 13 | 28 |
| B | 0 | 1 | 1 |
| C | 0 | 0 | 0 |
| D | 0 | 1 | 1 |
| E | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{28}{31}=0.90 \\
& I D=\frac{U G-L G}{n}=\frac{2}{15}=0.13
\end{aligned}
$$

## ITEM No. 15

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 2 | 2 |
| B | 14 | 10 | 24 |
| C | 1 | 2 | 3 |
| D | 0 | 1 | 1 |
| E $^{*}$ | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{0}{31}=0 \\
& I D=\frac{U G-L G}{n}=\frac{0}{15}=0
\end{aligned}
$$

ITEM No. 14

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 1 | 1 |
| C | 5 | 7 | 12 |
| D | 6 | 2 | 8 |
| E* $^{*}$ | 4 | 5 | 9 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{9}{31}=0.29 \\
& I D=\frac{U G-L G}{n}=\frac{-1}{15}=-0.06
\end{aligned}
$$

## ITEM No. 16

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A* | 12 | 12 | 24 |
| B | 0 | 1 | 1 |
| C | 0 | 0 | 0 |
| D | 0 | 1 | 1 |
| E | 3 | 1 | 4 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{24}{31}=0.77 \\
& I D=\frac{U G-L G}{n}=\frac{0}{15}=0
\end{aligned}
$$

## ITEM No. 17

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 0 | 0 |
| C $^{*}$ | 15 | 14 | 29 |
| D | 0 | 0 | 0 |
| E | 0 | 1 | 1 |
|  | 15 | 15 | 30 |

$I F=\frac{U G+L G}{N}=\frac{29}{31}=0.93$
$I D=\frac{U G-L G}{n}=\frac{1}{15}=0.06$

## ITEM No. 19

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A* $^{*}$ | 10 | 8 | 18 |
| B | 0 | 1 | 1 |
| C | 0 | 1 | 1 |
| D | 5 | 4 | 9 |
| E | 0 | 1 | 1 |
|  | 15 | 15 | 30 |

$$
\begin{gathered}
I F=\frac{U G+L G}{N}=\frac{18}{31}=0.58 \\
I D=\frac{U G-L G}{n}=\frac{2}{15}=0.13
\end{gathered}
$$

ITEM No. 18

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A* | 7 | 11 | 18 |
| B | 0 | 0 | 0 |
| C | 8 | 3 | 11 |
| D | 0 | 1 | 1 |
| E | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{18}{31}=0.58 \\
& I D=\frac{U G-L G}{n}=\frac{-4}{15}=-0.26
\end{aligned}
$$

## ITEM No. 20

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 1 | 1 | 2 |
| C* $^{*}$ | 14 | 11 | 25 |
| D | 0 | 1 | 1 |
| E | 0 | 1 | 1 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{25}{31}=0.80 \\
& I D=\frac{U G-L G}{n}=\frac{3}{15}=0.2
\end{aligned}
$$

## ITEM No. 21

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 0 | 0 |
| C $^{*}$ | 14 | 15 | 29 |
| D | 1 | 0 | 1 |
| E | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$I F=\frac{U G+L G}{N}=\frac{29}{31}=0.93$
$I D=\frac{U G-L G}{n}=\frac{-1}{15}=-0.06$
ITEM No. 23

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 2 | 2 |
| B | 0 | 0 | 0 |
| C | 2 | 0 | 2 |
| D* | 13 | 13 | 26 |
| E | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{26}{31}=0.83 \\
& I D=\frac{U G-L G}{n}=\frac{0}{15}=0
\end{aligned}
$$

ITEM No. 22

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 0 | 0 | 0 |
| C | 1 | 0 | 1 |
| D | 0 | 0 | 0 |
| E $^{*}$ | 14 | 14 | 28 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{28}{31}=0.90 \\
& I D=\frac{U G+L G}{N}=\frac{0}{15}=0
\end{aligned}
$$

## ITEM No. 24

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B $^{*}$ | 15 | 14 | 29 |
| C | 0 | 0 | 0 |
| D | 0 | 0 | 0 |
| E | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$$
\begin{gathered}
I F=\frac{U G+L G}{N}=\frac{29}{31}=0.93 \\
I D=\frac{U G-L G}{n}=\frac{1}{15}=0.06
\end{gathered}
$$

## ITEM No. 25

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 0 | 0 |
| C | 0 | 0 | 0 |
| D* | 15 | 14 | 29 |
| E | 0 | 1 | 1 |
|  | 15 | 15 | 30 |

$I F=\frac{U G+L G}{N}=\frac{29}{31}=0.93$
$I D=\frac{U G-L G}{n}=\frac{1}{15}=0.06$
ITEM No. 27

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 0 | 1 | 1 |
| C | 0 | 0 | 0 |
| D $^{*}$ | 15 | 12 | 27 |
| E | 0 | 1 | 1 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{27}{31}=0.87 \\
& I D=\frac{U G-L G}{n}=\frac{3}{15}=0.2
\end{aligned}
$$

ITEM No. 26

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B $^{*}$ | 15 | 13 | 28 |
| C | 0 | 0 | 0 |
| D | 0 | 1 | 1 |
| E | 0 | 1 | 1 |
|  | 15 | 15 | 30 |

$I F=\frac{U G+L G}{N}=\frac{28}{31}=0.90$
$I D=\frac{U G-L G}{n}=\frac{2}{15}=0.13$

## ITEM No. 28

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B* $^{*}$ | 15 | 13 | 28 |
| C | 0 | 1 | 1 |
| D | 0 | 1 | 1 |
| E | 0 | 0 | 0 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{28}{31}=0.90 \\
& I D=\frac{U G-L G}{n}=\frac{2}{15}=0.13
\end{aligned}
$$

## ITEM No. 29

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 2 | 2 | 4 |
| B | 0 | 0 | 0 |
| C | 0 | 1 | 1 |
| D | 1 | 1 | 2 |
| E $^{*}$ | 12 | 11 | 23 |
|  | 15 | 15 | 30 |

$I F=\frac{U G+L G}{N}=\frac{23}{31}=0.74$
$I D=\frac{U G-L G}{n}=\frac{1}{15}=0.06$

## ITEM No. 31

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 2 | 1 | 3 |
| B* $^{*}$ | 12 | 13 | 25 |
| C | 0 | 0 | 0 |
| D | 0 | 1 | 1 |
| E | 0 | 0 | 0 |
|  | 14 | 15 | 29 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{25}{31}=0.80 \\
& I D=\frac{U G-L G}{n}=\frac{-1}{15}=-0.06
\end{aligned}
$$

ITEM No. 30

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| $A^{*}$ | 13 | 15 | 28 |
| B | 0 | 2 | 2 |
| C | 0 | 0 | 0 |
| D | 0 | 0 | 0 |
| E | 2 | 3 | 5 |
|  | 15 | 15 | 30 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{28}{31}=0.90 \\
& I D=\frac{U G-L G}{n}=\frac{-2}{15}=-0.13
\end{aligned}
$$

## ITEM No. 32

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 1 | 0 | 1 |
| B | 0 | 0 | 0 |
| C* | 13 | 14 | 27 |
| D | 0 | 1 | 1 |
| E | 0 | 0 | 0 |
|  | 14 | 15 | 29 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{27}{31}=0.87 \\
& I D=\frac{U G-L G}{n}=\frac{-1}{15}=-0.06
\end{aligned}
$$

## ITEM No. 33

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 6 | 5 | 11 |
| B | 1 | 0 | 1 |
| C | 0 | 4 | 4 |
| D* | 6 | 4 | 10 |
| E | 1 | 2 | 3 |
|  | 14 | 15 | 29 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{10}{31}=0.32 \\
& I D=\frac{U G-L G}{n}=\frac{2}{15}=0.13
\end{aligned}
$$

ITEM No. 34

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 3 | 5 | 8 |
| B $^{*}$ | 7 | 4 | 11 |
| C | 3 | 5 | 8 |
| D | 1 | 1 | 2 |
| E | 0 | 0 | 0 |
|  | 14 | 15 | 29 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{11}{31}=0.35 \\
& I D=\frac{U G-L G}{n}=\frac{3}{15}=0.2
\end{aligned}
$$

| NO. | Testees | NUMBER OF TEST ITEM AWAL SCORE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | AWAL |
| 1 | SS1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 11 |
| 2 | SS2 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 10 |
| 3 | SS3 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 12 |
| 4 | SS4 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 11 |
| 5 | SS5 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 13 |
| 6 | SS6 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 11 |
| 7 | SS7 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 11 |
| 8 | SS8 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 11 |
| 9 | SS9 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 11 |
| 10 | SS10 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 10 |
| 11 | SS11 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 11 |
| 12 | SS12 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 12 |
| 13 | SS13 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 11 |
| 14 | SS14 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 11 |
| 15 | SS15 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 13 |
| 16 | SS16 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 12 |
| 17 | SS17 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 13 |
| 18 | SS18 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 13 |
| 19 | SS19 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 13 |
| 20 | SS20 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| 21 | SS21 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 |
| 22 | SS22 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 9 |
| 23 | SS23 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 12 |
| 24 | SS24 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 12 |
| 25 | SS25 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 10 |
| 26 | SS26 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 11 |
| 27 | SS27 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 11 |
| 28 | SS28 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 12 |
| 29 | SS29 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 11 |
| 30 | SS30 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 11 |
| 31 | SS31 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 13 |


| NO. | Testees | NUMBER OF TEST ITEM AKHIR SCORE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | AKHIR |
| 1 | SS1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 16 |
| 2 | SS2 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 13 |
| 3 | SS3 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 13 |
| 4 | SS4 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 11 |
| 5 | SS5 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 12 |
| 6 | SS6 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 16 |
| 7 | SS7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 16 |
| 8 | SS8 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 15 |
| 9 | SS9 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 15 |
| 10 | SS10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 14 |
| 11 | SS11 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 14 |
| 12 | SS12 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 12 |
| 13 | SS13 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 12 |
| 14 | SS14 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 11 |
| 15 | SS15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 15 |
| 16 | SS16 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 12 |
| 17 | SS17 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 15 |
| 18 | SS18 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 15 |
| 19 | SS19 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 15 |
| 20 | SS20 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 13 |
| 21 | SS21 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 6 |
| 22 | SS22 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 9 |
| 23 | SS23 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 12 |
| 24 | SS24 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 14 |
| 25 | SS25 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 14 |
| 26 | SS26 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 15 |
| 27 | SS27 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 15 |
| 28 | SS28 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 16 |
| 29 | SS29 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 15 |
| 30 | SS30 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 15 |
| 31 | SS31 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 |


| NO. | Testees | ODD - EVEN ITEM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{gathered} 1,3- \\ \hline 17 \\ \hline \end{gathered}$ <br> Odd | $\begin{array}{\|l\|} \hline 2,4-34 \\ \hline \text { Even } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | X |  |  |
| 1 | SS1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 27 | 14 | 13 |
| 2 | SS2 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 23 | 13 | 10 |
| 3 | SS3 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 25 | 13 | 12 |
| 4 | SS4 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 22 | 11 | 15 |
| 5 | SS5 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 25 | 12 | 14 |
| 6 | SS6 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 27 | 15 | 12 |
| 7 | SS7 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 27 | 14 | 13 |
| 8 | SS8 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 26 | 13 | 13 |
| 9 | SS9 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 26 | 13 | 13 |
| 10 | SS10 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 24 | 12 | 12 |
| 11 | SS11 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 25 | 13 | 13 |
| 12 | SS12 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 24 | 12 | 12 |
| 13 | SS13 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 23 | 12 | 11 |
| 14 | SS14 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 22 | 12 | 10 |
| 15 | SS15 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 28 | 12 | 15 |
| 16 | SS16 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 24 | 12 | 12 |
| 17 | SS17 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 28 | 14 | 14 |
| 18 | SS18 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 28 | 14 | 14 |
| 19 | SS19 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 28 | 14 | 14 |
| 20 | SS20 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 21 | 9 | 11 |
| 21 | SS21 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 12 | 5 | 7 |
| 22 | SS22 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 18 | 9 | 9 |
| 23 | SS23 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 24 | 12 | 12 |
| 24 | SS24 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 26 | 12 | 14 |


| $\mathbf{2 5}$ | $\mathbf{S S} 25$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | 24 | 13 | 12 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{2 6}$ | $\mathbf{S S} 26$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | 26 | 14 | 12 |
| $\mathbf{2 7}$ | $\mathbf{S S} 27$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | 26 | 13 | 13 |
| $\mathbf{2 8}$ | $\mathbf{S S} 28$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | 28 | 14 | 14 |
| $\mathbf{2 9}$ | $\mathbf{S S} 29$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | 26 | 13 | 13 |
| $\mathbf{3 0}$ | $\mathbf{S S 3 0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | 26 | 13 | 13 |
| $\mathbf{3 1}$ | $\mathbf{S S 3 1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | $\mathbf{1}$ | 28 | 14 | 14 |
| TOTAL ITEM |  | 31 | 31 | 30 | 1 | 20 | 24 | 27 | 23 | 28 | 26 | 0 | 12 | 29 | $\mathbf{9}$ | 0 | 25 | 30 | 19 | 19 | 24 | 30 | 29 | 27 | 30 | 30 | 29 | 28 | 29 | 23 | 28 | 26 | 28 | 10 | 12 |  | 386 | 386 |


| NO. | Testees | UPPER - LOWER GROUP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | X |
| 1 | SS31 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 28 |
| 2 | SS18 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 28 |
| 3 | SS19 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 28 |
| 4 | SS17 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 28 |
| 5 | SS28 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 28 |
| 6 | SS15 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 28 |
| 7 | SS7 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 27 |
| 8 | SS6 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 27 |
| 12 | SS1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 27 |
| 10 | SS29 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 26 |
| 11 | SS5 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 25 |
| 9 | SS26 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 |
| 13 | SS27 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 26 |
| 14 | SS8 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 26 |
| 15 | SS30 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 |
| 16 | SS9 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 26 |
| 17 | SS24 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 26 |
| 18 | SS11 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 25 |
| 19 | SS3 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 25 |
| 20 | SS25 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 24 |


| 21 | SS12 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22 | SS23 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 24 |
| 23 | SS16 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 24 |
| 24 | SS10 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 24 |
| 25 | SS13 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 23 |
| 26 | SS2 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 23 |
| 27 | SS14 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 22 |
| 28 | SS4 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 22 |
| 29 | SS20 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 21 |
| 30 | SS22 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 18 |
| 31 | SS21 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 12 |
| UG |  | 15 | 15 | 15 | 0 | 12 | 12 | 14 | 12 | 15 | 14 | 0 | 7 | 15 | 4 | 0 | 12 | 15 | 7 | 10 | 14 | 14 | 14 | 13 | 15 | 15 | 15 | 15 | 15 | 12 | 13 | 12 | 13 | 6 | 7 | 767 |
| LG |  | 15 | 15 | 14 | 1 | 7 | 11 | 12 | 10 | 14 | 11 | 0 | 5 | 13 | 5 | 0 | 12 | 14 | 11 | 8 | 11 | 15 | 14 | 13 | 14 | 14 | 13 | 12 | 13 | 11 | 15 | 13 | 14 | 4 | 4 |  |
| Total |  | 30 | 30 | 29 | 1 | 19 | 23 | 26 | 22 | 29 | 25 | 0 | 12 | 28 | 9 | 0 | 24 | 29 | 18 | 18 | 25 | 29 | 28 | 26 | 29 | 29 | 28 | 27 | 28 | 23 | 28 | 25 | 27 | 10 | 11 |  |

## Discussion Table of the First Year

| Item | UG | LG | IF | Category | Criteria | ID | REMARK | r tabel | r hitung | Criteria |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 15 | 15 | 0.96 | Easy | Rejected | 0 | Low DP | Rejected | 0.3550 | 0 | Invalid |  |
| 2 | 15 | 15 | 0.96 | Easy | Rejected | 0 | Low DP | Rejected | 0.3550 | 0 | Invalid |  |
| 3. | 15 | 14 | 0.93 | Easy | Rejected | 0.06 | Low DP | Revised | 0.3550 | 0.20 | Invalid |  |
| 4. | 0 | 1 | 0.03 | Difficult | Accepted | -0.06 | Negative DP | Rejected | 0.3550 | $-0,7$ | Invalid |  |
| 5. | 12 | 7 | 0.61 | Middle | Revised | 0.33 | Low DP | Accepted | 0.3550 | 0.20 | Invalid |  |
| 6. | 12 | 11 | 0.74 | Easy | Rejected | 0.06 | Low DP | Revised | 0.3550 | 0.44 | Valid |  |
| 7. | 14 | 12 | 0.83 | Easy | Rejected | 0.13 | Low DP | Revised | 0.3550 | 0.55 | Valid |  |
| 8. | 12 | 10 | 0.70 | Middle | Revised | 0.13 | Low DP | Revised | 0.3550 | 0.04 | Invalid |  |
| 9. | 15 | 14 | 0.83 | Easy | Rejected | 0.06 | Low DP | Revised | 0.3550 | 0.50 | Valid |  |
| 10. | 14 | 11 | 0.80 | Easy | Rejected | 0.06 | Low DP | Revised | 0.3550 | 0.52 | Valid |  |
| 11. | 0 | 0 | 0 | Difficult | Accepted |  | 0 | Low DP | Rejected | 0.3550 | 0 | Invalid |
| 12. | 7 | 5 | 0.38 | Middle | Revised | 0.13 | Low DP | Revised | 0.3550 | 0.14 | Invalid |  |
| 13. | 15 | 13 | 0.90 | Easy | Rejected | 0.13 | Low DP | Revised | 0.3550 | 0.65 | Valid |  |
| 14. | 4 | 5 | 0.29 | Difficult | Accepted | -0.06 | Negative DP | Rejected | 0.3550 | 0.05 | Invalid |  |
| 15. | 0 | 0 | 0 | Difficult | Accepted | 0.13 | Low DP | Revised | 0.3550 | 0 | Invalid |  |
| 16. | 12 | 12 | 0.77 | Easy | Rejected | 0 | Low DP | Rejected | 0.3550 | 0.53 | Valid |  |
| 17. | 15 | 14 | 0.93 | Easy | Rejected | 0.06 | Low DP | Revised | 0.3550 | 0.20 | Invalid |  |
| 18. | 7 | 11 | 0.58 | Middle | Revised | -0.26 | Negative DP | Rejected | 0.3550 | $-0,16$ | Invalid |  |
| 19. | 10 | 8 | 0.58 | Middle | Revised | 0.13 | Low DP | Revised | 0.3550 | 0.50 | Valid |  |
| 20. | 14 | 11 | 0.80 | Easy | Rejected | 0.2 | Low DP | Revised | 0.3550 | 0.52 | Valid |  |


| 21. | 14 | 15 | 0.93 | Easy | Rejected | -0.06 | Negative DP | Rejected | 0.3550 | 0,15 | Valid |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22. | 14 | 14 | 0.90 | Easy | Rejected | 0 | Low DP | Rejected | 0.3550 | 0.37 | Valid |
| 23. | 13 | 13 | 0.83 | Easy | Rejected | 0 | Low DP | Rejected | 0.3550 | 0.58 | Valid |
| 24. | 15 | 14 | 0.93 | Easy | Rejected | 0.06 | Low DP | Revised | 0.3550 | 0.7 | Valid |
| 25. | 15 | 14 | 0.93 | Easy | Rejected | 0.06 | Low DP | Revised | 0.3550 | 0.7 | Valid |
| 26. | 15 | 13 | 0.90 | Easy | Rejected | 0.13 | Low DP | Revised | 0.3550 | 0.77 | Valid |
| 27. | 15 | 12 | 0.87 | Easy | Rejected | 0.2 | Low DP | Revised | 0.3550 | 0.57 | Valid |
| 28. | 15 | 13 | 0.90 | Easy | Rejected | 0.13 | Low DP | Revised | 0.3550 | 0.65 | Valid |
| 29. | 12 | 11 | 0.74 | Easy | Revised | 0.06 | Low DP | Revised | 0.3550 | 0.28 | Invalid |
| 30. | 13 | 15 | 0.90 | Easy | Rejected | -0.13 | Negative DP | Rejected | 0.3550 | -0.05 | Invalid |
| 31. | 12 | 13 | 0.80 | Easy | Rejected | -0.06 | Negative DP | Rejected | 0.3550 | 0.39 | Valid |
| 32. | 13 | 14 | 0.87 | Easy | Rejected | -0.06 | Negative DP | Rejected | 0.3550 | 0.07 | Invalid |
| 33. | 6 | 4 | 0.32 | Middle | Revised | 0.13 | Low DP | Revised | 0.3550 | 0.22 | Invalid |
| 34. | 7 | 4 | 0.35 | Middle | Revised | 0.2 | Low DP | Revised | 0.3550 | 0.40 | Valid |
|  |  |  |  | 7 Middle | 7 Revised |  | 7 Negative DP | 7 Rejected |  |  | 18 items Valid |
|  |  |  |  | 4 Difficult | 4 Accepted |  | 27 Low DP | 6 Rejected |  |  |  |
|  |  |  |  | 23 Rejected | 23 Rejected |  |  | 20 Revised |  |  | 16 Invalid |
|  |  |  |  |  |  |  |  | 1 Accepted |  |  |  |

## b. Test Description of Second Year Students

The students in the second year of SMAN 3 Palopo would be described in this section. There were 33 students in the class and the multiple-choice test consisted of 30 numbers and 5 answer choices ( $a, b, c$. d and e). The questions were divided into 4 sections (listening, reading, grammar, and vocabulary section). The test was given at students in the first year at SMAN 3 Palopo. The test was held on June $4^{\text {th }}$, 2018 with the total time given to the students for answering the whole items was 90 minutes.

Table 13: The Scoring Rubric
In scoring rubric the researcher used the following formula:

$$
\text { Score }=\frac{\text { number of correct answer }}{\text { number of questions }} \times 100
$$

| Number of <br> correct answer | Score |
| :---: | :---: |
| 1 | 3 |
| 2 | 7 |
| 3 | 10 |
| 4 | 13 |
| 5 | 17 |
| 6 | 20 |
| 7 | 23 |
| 8 | 27 |
| 9 | 30 |
| 10 | 33 |
| 11 | 37 |
| 12 | 40 |
| 13 | 43 |
| 14 | 47 |
| 15 | 50 |
| 16 | 53 |
| 17 | 57 |
| 18 | 60 |


| 19 | 63 |
| :---: | :---: |
| 20 | 67 |
| 21 | 70 |
| 22 | 73 |
| 23 | 77 |
| 24 | 80 |
| 25 | 83 |
| 26 | 87 |
| 27 | 90 |
| 28 | 93 |
| 29 | 97 |
| 30 | 100 |

## 3. Analysis

In this part, scores of a class were 33 students on a test consisting of 30 items on the following table. The table contained a frequency distribution showed the number of students who obtained each mark awarded; tallies that was representing the number of students obtaining the same scores; the frequency and the percentage of each score on the multiple-choice test.

Table 14: The Frequency Distribution of Scores

| No. | Raw <br> Score | Final <br> Score | Tally | Frequency | Percentage <br> $(\%)$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 27 | 90 | $/ / / /$ | 3 | 9.09 |
| 2. | 26 | 87 | $/ / / / / /$ | 7 | 21.22 |
| 3. | 25 | 83 | $/ / / /$ | 4 | 12.12 |
| 4. | 24 | 80 | $/ / / / / / /$ | 8 | 24.24 |
| 5. | 23 | 77 | $/ / / /$ | 4 | 12.12 |
| 6. | 22 | 73 | $/$ | 1 | 3.03 |
| 7. | 21. | 70 | $/$ | 1 | 3.03 |
| 8. | 18 | 60 | $/ /$ | 2 | 6.06 |
| 9. | 17 | 57 | $/$ | 1 | 3.03 |
| 10. | 11 | 37 | $/$ | 1 | 3.03 |
| 11. | 9 | 30 | $/$ | 1 | 3.03 |
| $\Sigma$ | Total |  |  | 33 | 33 |

The distribution of the scores illustrated above can be presented in another way as in the following frequency polygon:

A. Mean Score \& Standard Deviation
1). Measures of Central Tendency

There are three ways of measuring central tendency, mode, median, and mean, of which the mean is the most efficient measure.

Table 15: The Frequency Distribution of Scores

| No. | $\mathbf{X}$ | $\mathbf{F}$ | $\mathbf{F x}$ |
| :---: | :---: | :---: | :---: |
| 1 | 9.0 | 3 | 27 |
| 2 | 8.7 | 7 | 60.9 |
| 3 | 8.3 | 4 | 33.2 |
| 4 | 8.0 | 8 | 64 |
| 5 | 7.7 | 4 | 30.8 |
| 6 | 7.3 | 1 | 7.3 |
| 7 | 7.0 | 1 | 7.0 |
| 8 | 6.0 | 2 | 12 |
| 9 | 5.7 | 1 | 5.7 |
| 10 | 3.7 | 1 | 3.7 |
| 11 | 3.0 | 1 | 3.0 |
| Total | $\mathbf{7 4 . 4}$ | $\mathbf{3 3}$ | $\mathbf{\Sigma F X}=\mathbf{2 5 4 . 6}$ |

$$
X=\frac{\Sigma \mathrm{fX}}{\mathrm{~N}}=\frac{254.6}{33}=7.7
$$

From the table above, we could see that in this particular case there was a fairly close correspondence among the mode (8.0), median (7.8), and mean (7.7).

## 2). Measures of Dispersion

The measure of dispersion is related to the range or spread of scores. The mean by itself enable to describe an individual students' score by comparing it with average set of scores obtained by a group.

Table 16: Standard Deviation

| No. | $\mathbf{X}$ | $\mathbf{D}$ | $\mathbf{d}^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: |
| 1 | 9.0 | 1.3 | 1.69 |
| 2 | 9.0 | 1.3 | 1.69 |
| 3 | 9.0 | 1.3 | 1.69 |
| 4 | 8.7 | 1 | 1 |
| 5 | 8.7 | 1 | 1 |
| 6 | 8.7 | 1 | 1 |
| 7 | 8.7 | 1 | 1 |
| 8 | 8.7 | 1 | 1 |
| 9 | 8.7 | 1 | 1 |
| 10 | 8.7 | 1 | 1 |
| 11 | 8.3 | 0.6 | 0.36 |
| 12 | 8.3 | 0.6 | 0.36 |
| 13 | 8.3 | 0.6 | 0.36 |
| 14 | 8.3 | 0.6 | 0.36 |
| 15 | 8.0 | 0.3 | 0.09 |
| 16 | 8.0 | 0.3 | 0.09 |
| 17 | 8.0 | 0.3 | 0.09 |
| 18 | 8.0 | 0.3 | 0.09 |
| 19 | 8.0 | 0.3 | 0.09 |
| 20 | 8.0 | 0.3 | 0.09 |
| 21 | 8.0 | 0.3 | 0.09 |
| 22 | 8.0 | 0.3 | 0.09 |
| 23 | 7.7 | 0 | 0 |
| 24 | 7.7 | 0 | 0 |
| 25 | 7.7 | 0 | 0 |


| 26 | 7.7 | 0 | 0 |
| :---: | :---: | :---: | :---: |
| 27 | 7.3 | -0.4 | 0.16 |
| 28 | 7.0 | -0.7 | 0.49 |
| 29 | 6.0 | -1.7 | 2.89 |
| 30 | 6.0 | -1.7 | 2.89 |
| 31 | 5.7 | -2 | 4 |
| 32 | 3.7 | -4 | 16 |
| 33 | 3.0 | -4.7 | 22.09 |
| Total | $\mathbf{2 5 4 . 6}$ | $\mathbf{0 . 5}$ | $\mathbf{6 3 . 6 5}$ |

a) Range $=84-36=48$
b) Standard deviation
s.d. $=\sqrt{\frac{\sum d^{2}}{N}}$
s. $d=\frac{\sqrt{63.65}}{33}=\sqrt{1.9287878}$
s. $d=1.38$

The standard deviation of the data above is 1.38
3). Reliability

To calculate the reliability the researcher used the Pearson product moment correlation formula as follows:

$$
r_{x y}=\frac{N \sum x y-\left(\sum x\right)\left(\sum y\right)}{\sqrt{\left[N \sum x^{2}-\left(\sum x\right)^{2}\right]\left[N \sum y^{2}-\left(\sum y\right)^{2}\right]}}
$$

Table 17: Split-Half Method

| No. | Students | Odd Items (1,3,5-17) <br> $(\mathbf{X})$ | Even Items (2,4,6-34) <br> $(\mathbf{Y})$ |
| :---: | :---: | :---: | :---: |
| 1. | SS1 | 13 | 11 |
| 2. | SS2 | 11 | 9 |
| 3. | SS3 | 7 | 4 |
| 4. | SS 4 | 9 | 8 |


| 5 | SS5 | 14 | 12 |
| :---: | :---: | :---: | :---: |
| 6. | SS6 | 15 | 12 |
| 7. | SS7 | 12 | 13 |
| 8. | SS8 | 12 | 12 |
| 9. | SS9 | 13 | 13 |
| 10. | SS10 | 13 | 13 |
| 11. | SS11 | 11 | 13 |
| 12. | SS12 | 11 | 13 |
| 13. | SS13 | 11 | 12 |
| 14. | SS14 | 11 | 13 |
| 15. | SS15 | 12 | 12 |
| 16. | SS16 | 11 | 13 |
| 17. | SS17 | 13 | 10 |
| 18. | SS18 | 12 | 13 |
| 19. | SS19 | 14 | 12 |
| 20. | SS20 | 15 | 12 |
| 21. | SS21 | 11 | 12 |
| 22. | SS22 | 13 | 12 |
| 23. | SS23 | 13 | 13 |
| 24. | SS24 | 13 | 12 |
| 25. | SS25 | 12 | 13 |
| 26. | SS26 | 11 | 13 |
| 27. | SS27 | 14 | 7 |
| 28. | SS28 | 12 | 13 |
| 29. | SS29 | 10 | 10 |
| 30. | SS30 | 5 | 13 |
| 31. | SS31 | 12 | 4 |
| 32. | SS32 | 12 | 12 |
| 33. | SS32 | $\mathbf{\Sigma X 8 9}$ | 12 |
|  |  |  | $\mathbf{3 7 6}$ |

$$
\begin{aligned}
& \boldsymbol{\Sigma} \mathbf{X}=\mathbf{3 8 9} \\
& \boldsymbol{\Sigma} \mathbf{X}^{\mathbf{2}}=\mathbf{1 5 1 . 3 2 1} \\
& \boldsymbol{\Sigma} \mathbf{Y}=\mathbf{3 7 6} \\
& \boldsymbol{\Sigma} \mathbf{Y}^{\mathbf{2}}=\mathbf{1 4 1 . 3 7 6} \\
& \boldsymbol{\Sigma X Y}=\mathbf{1 4 6 . 2 4 6} \\
& r_{x y}=\frac{33 \times 146.246-(389)(376)}{\sqrt{\left(33 \times 151.321-(389)^{2}\right)}\left(33 \times 141.376-(376)^{2}\right)} \\
& r_{x y}=\frac{4.826 .712-146.246}{\sqrt{(4.993 .593-151.321)(4.66 .5 .408-141.376)}}
\end{aligned}
$$

$r_{x y}=\frac{4.680 .466}{\sqrt{(4.842 .272)}(4.524 .032)}$
$r_{x y}=\frac{4.680 .466}{\sqrt{2.190659}}$
$r_{x y}=\frac{4.680 .466}{1.480087}$
$r_{x y}=3.16$
The researcher found that $r_{x y}=3.16$. It showed half of the reliability of the test. So the $\mathrm{r} r_{x y}$ is called $r \frac{11}{22}$ or $r_{o d d-e v e n}$ to find out the reliability of the test. The next step is analyzed using Spearman-Brown odd even model correlation to see the reliability of the test.

$$
\begin{aligned}
& r_{11}=\frac{2 r \frac{11}{22}}{\left(1+r \frac{11}{22}\right)} \\
& r_{11}=\frac{2 \times 3.16}{(1+3.16)} \\
& r_{11}=\frac{6.32}{4.16} \\
& r_{11}=1.51
\end{aligned}
$$

From the result above, the researcher conclude that the resulted calculation $\left(\boldsymbol{r} \frac{11}{22}\right)=1.51$. It showed that the evaluated test is highly reliable because $1.51>0.3$ and belong to very high category.
4). Validity

The $r_{p b i}$ of the item number 1 is 0.43 . It means the item number 1 is valid. Based on the $\mathrm{r}_{\mathrm{pbi}}$ formula by using Microsoft Excel Application, the researcher found the validity of the test in the second year SMAN 3 Palopo had 22 items were valid and 8 items invalid. It implied 22 items could measure the expected competency of the teacher and there were 8 items could not measure the expected competency.
5). Difficulty Level

The level of difficulty is an opportunity to answer correctly for each item in ability level that could be showed in index form. The following below is the classification of difficulty level.

Table 18: Item Difficulty Table

| Item | UG | LG | IF | Category | Criteria |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 16 | 12 | 0.87 | Easy | Rejected |
| 2 | 1 | 3 | 0.59 | Middle | Revised |
| 3. | 15 | 14 | 0.90 | Easy | Rejected |
| 4. | 16 | 14 | 0.93 | Easy | Rejected |
| 5. | 16 | 11 | 0.84 | Easy | Rejected |
| 6. | 16 | 13 | 0.71 | Easy | Rejected |
| 7. | 10 | 15 | 0.95 | Easy | Rejected |
| 8. | 10 | 5 | 0.46 | Middle | Revised |
| 9. | 16 | 5 | 0.46 | Middle | Revised |
| 10. | 15 | 14 | 0.93 | Easy | Rejected |
| 11. | 12 | 13 | 0.90 | Easy | Rejected |
| 12. | 16 | 14 | 0.90 | Easy | Rejected |
| 13. | 11 | 10 | 0.68 | Middle | Revised |
| 14. | 16 | 14 | 0.93 | Easy | Rejected |


| 15. | 4 | 10 | 0.65 | Middle | Revised |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 16. | 16 | 10 | 0.81 | Easy | Rejected |
| 17. | 16 | 7 | 0.34 | Middle | Revised |
| 18. | 16 | 14 | 0.93 | Easy | Rejected |
| 19. | 16 | 12 | 0.87 | Easy | Rejected |
| 20. | 16 | 13 | 0.90 | Easy | Rejected |
| 21. | 16 | 11 | 0.82 | Easy | Rejected |
| 22. | 16 | 11 | 0.82 | Easy | Rejected |
| 23. | 15 | 14 | 0.93 | Easy | Rejected |
| 24. | 14 | 9 | 0.87 | Easy | Rejected |
| 25. | 16 | 12 | 0.84 | Easy | Rejected |
| 26. | 16 | 14 | 0.87 | Easy | Rejected |
| 27. | 14 | 10 | 0.78 | Easy | Rejected |
| 28. | 2 | 14 | 0.93 | Easy | Rejected |
| 29. | 16 | 8 | 0.68 | Middle | Revised |
| 30. | 2 | 1 | 0.09 | Difficult | Accepted |

The table above explained about the level difficulty of each number of the multiple-choice test. The table described that there were 22 items in easy level with the rejected category, 7 items in middle level needed to revise and 1 item in difficult level and accepted category (valid).
6). Discrimination Power

To find out the index of facility and index of discrimination, the researcher used the formula as follow:

$$
\begin{aligned}
& I F=\frac{U G+L G}{N} \\
& I D=\frac{U G-L G}{n}
\end{aligned}
$$

Table 19: The Indices of Facility and Discrimination

| Item | UG | LG | IF | ID | REMARK |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 16 | 12 | 0.87 | 0.36 | Low DP | Accepted |
| 2 | 1 | 3 | 0.59 | -0.18 | Negative DP | Rejected |
| 3. | 15 | 14 | 0.90 | 0.09 | Low DP | Revised |
| 4. | 16 | 14 | 0.93 | 0.18 | Low DP | Revised |
| 5. | 16 | 11 | 0.84 | 0.45 | Low DP | Accepted |
| 6. | 16 | 13 | 0.71 | 0.27 | Low DP | Revised |
| 7. | 10 | 15 | 0.95 | 0.09 | Low DP | Revised |
| 8. | 10 | 5 | 0.46 | 0.45 | Low DP | Accepted |
| 9. | 16 | 5 | 0.46 | 0.45 | Low DP | Accepted |
| 10. | 15 | 14 | 0.93 | 0.18 | Low DP | Revised |
| 11. | 12 | 13 | 0.90 | 0.27 | Low DP | Revised |
| 12. | 16 | 14 | 0.90 | 0.09 | Low DP | Revised |
| 13. | 11 | 10 | 0.68 | 0.18 | Low DP | Revised |
| 14. | 16 | 14 | 0.93 | 0.18 | Low DP | Revised |
| 15. | 4 | 10 | 0.65 | 0.09 | Low DP | Revised |
| 16. | 16 | 10 | 0.81 | 0.84 | Low DP | Accepted |
| 17. | 16 | 7 | 0.34 | -0.27 | Negative DP | Rejected |
| 18. | 16 | 14 | 0.93 | 0.18 | Low DP | Revised |
| 19. | 16 | 12 | 0.87 | 0.36 | Low DP | Accepted |
| 20. | 16 | 13 | 0.90 | 0.27 | Low DP | Revised |
| 21. | 16 | 11 | 0.82 | 0.45 | Low DP | Accepted |
| 22. | 16 | 11 | 0.82 | 0.45 | Low DP | Accepted |
| 23. | 15 | 14 | 0.93 | 0.18 | Low DP | Revised |
| 24. | 14 | 9 | 0.87 | 0.83 | Low DP | Accepted |
| 25. | 16 | 12 | 0.84 | 0.27 | Low DP | Revised |
| 26. | 16 | 14 | 0.87 | 0 | Low DP | Rejected |
| 27. | 14 | 10 | 0.78 | 0.63 | Low DP | Accepted |
| 28. | 2 | 14 | 0.93 | 0.18 | Low DP | Revised |
| 29. | 16 | 8 | 0.68 | 0.54 | Low DP | Accepted |
| 30. | 2 | 1 | 0.09 | 0.09 | Negative DP | Revised |

From the table above the researcher found that there were 11 items had low discrimination power with accepted category. 15 items had low Discrimination Power needed to revise and 1 item is rejected, 2 items in negative discrimination power (rejected) and 1 item in negative Discrimination Power needed to revise.

## c. Qualitative Analysis

In this section investigated the researcher qualitative analysis. According to the interview June $24^{\text {th }}$ 2018, the teacher at first year has been a teacher at SMAN Palopo for 12 years. While the teacher in the second year has been a teacher at SMAN 3 Palopo for 4 years.

However, the teacher in the first and second year said that the syllabus and English multiple-choice test in SMAN 3 Palopo is sometimes arranged by the English teacher team or by the English teacher itself. The books and internet become the references to arrange the syllabus and students' test. When the researcher asked them about the importance of the test, the teachers said that the test was very important for the students and it must be held. Without the test we could not know how far the students have mastered the learning materials and to give score for the students we need test. The test must valid because the test must be congruent with the syllabus. If it were not congruent, it means the test were not valid.

The teachers in the first and second year explained that they were not undergoing the hardship in designing or constructing the test, because all of the test items have been given to the students and appropriate with the syllabus. If the tests were not appropriate with syllabus, the students would not be able to answer the test questions. So, test must in line with the syllabus. The researcher asked the teachers about "do their test were able to measure the students ability?" then the
teachers said: "yes, the test were able to measure the students ability, because the test drawed clearly how the students mastered the test has been learned."

Furthermore, when the researcher wanted to analyze the blueprint, the researcher found that teacher in the first year and the second year at SMAN 3 Palopo did not make the blueprint before designing the test items. Even though in the interview section they said that the blueprint is very important in designing and constructing the test, in fact the teachers did not make the blueprint. Meanwhile, in this research the researcher only analyzed the standardization the test items by using some formula and specific method. It supposed to get the attainment of the standardization of English multiple-choice test item for English subject at SMAN 3 Palopo.

## 7. Full Item Analysis

The following are Full Item Analysis from no. 1 until no. 50

## ITEM No. 1

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 0 | 0 |
| C | 0 | 1 | 1 |
| D* | 16 | 12 | 28 |
| E | 0 | 3 | 3 |
|  | 16 | 16 | 32 |

$I F=\frac{U G+L G}{N}=\frac{28}{32}=0.87$
$I D=\frac{U G-L G}{n}=\frac{4}{11}=0.36$

## ITEM No. 3

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B $^{*}$ | 15 | 14 | 29 |
| C | 1 | 1 | 2 |
| D | 0 | 1 | 1 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
I F=\frac{U G+L G}{N}=\frac{29}{32}=0.90
$$

$$
I D=\frac{U G-L G}{n}=\frac{1}{11}=0.09
$$

## ITEM No. 2

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A $^{*}$ | 1 | 3 | 19 |
| B | 0 | 5 | 5 |
| C | 15 | 7 | 7 |
| D | 0 | 1 | 1 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{19}{32}=0.59 \\
& I D=\frac{U G-L G}{n}=\frac{-2}{11}=-0.18
\end{aligned}
$$

ITEM No. 4

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B* $^{*}$ | 16 | 14 | 30 |
| C | 0 | 0 | 0 |
| D | 0 | 0 | 0 |
| E | 0 | 2 | 2 |
|  | 16 | 16 | 32 |

$$
I F=\frac{U G+L G}{N}=\frac{30}{32}=0.93
$$

$I D=\frac{U G-L G}{n}=\frac{2}{11}=0.18$

## ITEM No. 5

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 3 | 3 |
| B | 0 | 0 | 0 |
| C* $^{*}$ | 16 | 11 | 27 |
| D | 0 | 1 | 1 |
| E | 0 | 1 | 1 |
|  | 16 | 16 | 32 |

$$
I F=\frac{U G+L G}{N}=\frac{27}{32}=084
$$

$$
I D=\frac{U G-L G}{n}=\frac{5}{11}=0.45
$$

## ITEM No. 7

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 0 | 0 | 0 |
| C | 0 | 0 | 0 |
| D* $^{*}$ | 16 | 15 | 31 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{31}{32}=0.96 \\
& I D=\frac{U G-L G}{n}=\frac{1}{11}=0.09
\end{aligned}
$$

ITEM No. 6

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 7 |
| B | 0 | 0 | 0 |
| C | 0 | 2 | 0 |
| D | 0 | 0 | 0 |
| E $^{*}$ | 16 | 13 | 23 |
|  | 16 | 16 | 32 |

$I F=\frac{U G+L G}{N}=\frac{23}{32}=0.71$
$I D=\frac{U G-L G}{n}=\frac{3}{11}=0.27$

## ITEM No. 8

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 5 | 5 |
| B | 0 | 0 | 0 |
| C | 6 | 5 | 11 |
| D | 0 | 1 | 1 |
| E* $^{*}$ | 10 | 5 | 15 |
|  | 16 | 16 | 32 |

$I F=\frac{U G+L G}{N}=\frac{15}{32}=0.46$
$I D=\frac{U G-L G}{n}=\frac{5}{11}=0.45$

## ITEM No. 9

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A $^{*}$ | 10 | 5 | 15 |
| B | 0 | 2 | 2 |
| C | 0 | 1 | 1 |
| D | 5 | 5 | 10 |
| E | 1 | 3 | 4 |
|  | 16 | 16 | 32 |

$I F=\frac{U G+L G}{N}=\frac{15}{32}=0.46$
$I D=\frac{U G-L G}{n}=\frac{5}{11}=0.45$
ITEM No. 11

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 3 | 3 |
| B | 0 | 0 | 0 |
| C $^{*}$ | 16 | 13 | 29 |
| D | 0 | 0 | 0 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{29}{32}=0.90 \\
& I D=\frac{U G-L G}{n}=\frac{3}{11}=0.27
\end{aligned}
$$

ITEM No. 10

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A $^{*}$ | 16 | 14 | 30 |
| B | 0 | 0 | 0 |
| C | 0 | 0 | 0 |
| D | 0 | 0 | 0 |
| E | 0 | 2 | 2 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{30}{32}=0.93 \\
& I D=\frac{U G-L G}{n}=\frac{2}{11}=0.18
\end{aligned}
$$

## ITEM No. 12

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 1 | 1 |
| C | 1 | 1 | 2 |
| D | 0 | 0 | 0 |
| E $^{*}$ | 15 | 14 | 29 |
|  | 16 | 16 | 32 |

$I F=\frac{U G+L G}{N}=\frac{29}{32}=0.90$
$I D=\frac{U G-L G}{n}=\frac{1}{11}=0.09$

ITEM No. 13

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 0 | 0 |
| C | 0 | 0 | 0 |
| D* | 12 | 10 | 22 |
| E | 4 | 6 | 10 |
|  | 16 | 16 | 32 |

$I F=\frac{U G+L G}{N}=\frac{22}{32}=0.68$
$I D=\frac{U G-L G}{n}=\frac{2}{11}=0.18$

## ITEM No. 15

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| $\mathrm{~B}^{*}$ | 11 | 10 | 21 |
| C | 5 | 6 | 11 |
| D | 0 | 0 | 0 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{21}{32}=0.65 \\
& I D=\frac{U G-L G}{n}=\frac{1}{11}=0.09
\end{aligned}
$$

ITEM No. 14

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 1 | 1 |
| C | 0 | 0 | 0 |
| D* $^{*}$ | 16 | 14 | 30 |
| E | 0 | 1 | 1 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{30}{32}=0.93 \\
& I D=\frac{U G-L G}{n}=\frac{2}{11}=0.18
\end{aligned}
$$

ITEM No. 16

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 0 | 5 | 5 |
| C | 0 | 0 | 0 |
| D* | 16 | 10 | 26 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{26}{32}=0.81 \\
& I D=\frac{U G-L G}{n}=\frac{6}{11}=0.54
\end{aligned}
$$

## ITEM No. 17

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A $^{*}$ | 4 | 7 | 11 |
| B | 12 | 7 | 19 |
| C | 0 | 0 | 0 |
| D | 0 | 2 | 2 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$I F=\frac{U G+L G}{N}=\frac{11}{32}=0.34$
$I D=\frac{U G-L G}{n}=\frac{-3}{11}=-0.27$

## ITEM No. 19

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 0 | 0 | 0 |
| C | 0 | 0 | 0 |
| D* | 16 | 12 | 28 |
| E | 0 | 3 | 3 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{28}{32}=0.87 \\
& I D=\frac{U G-L G}{n}=\frac{4}{11}=0.36
\end{aligned}
$$

ITEM No. 18

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 2 | 2 |
| C $^{*}$ | 16 | 14 | 30 |
| D | 0 | 0 | 0 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{30}{32}=0.93 \\
& I D=\frac{U G-L G}{n}=\frac{2}{11}=0.18
\end{aligned}
$$

## ITEM No. 20

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A $^{*}$ | 16 | 13 | 29 |
| B | 0 | 1 | 1 |
| C | 0 | 2 | 2 |
| D | 0 | 0 | 0 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{29}{32}=0.90 \\
& I D=\frac{U G-L G}{n}=\frac{3}{11}=0.27
\end{aligned}
$$

## ITEM No. 21

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 1 | 1 |
| C $^{*}$ | 16 | 11 | 27 |
| D | 0 | 3 | 3 |
| E | 0 | 1 | 2 |
|  | 16 | 16 | 32 |

$I F=\frac{U G+L G}{N}=\frac{27}{32}=0.84$
$I D=\frac{U G-L G}{n}=\frac{5}{11}=0.45$
ITEM No. 23

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A* | 16 | 14 | 30 |
| B | 0 | 0 | 0 |
| C | 0 | 1 | 1 |
| D | 0 | 1 | 1 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{30}{32}=0.93 \\
& I D=\frac{U G-L G}{n}=\frac{2}{11}=0.18
\end{aligned}
$$

ITEM No. 22

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| $A^{*}$ | 16 | 11 | 27 |
| B | 0 | 2 | 2 |
| C | 0 | 1 | 1 |
| $D$ | 0 | 1 | 1 |
| E | 0 | 1 | 1 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{27}{32}=0.84 \\
& I D=\frac{U G-L G}{n}=\frac{5}{11}=0.45
\end{aligned}
$$

## ITEM No. 24

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 0 | 0 | 0 |
| C | 0 | 1 | 1 |
| D | 0 | 5 | 5 |
| E* | 16 | 9 | 25 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{25}{32}=0.87 \\
& I D=\frac{U G-L G}{n}=\frac{7}{11}=0.63
\end{aligned}
$$

## ITEM No. 25

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 0 | 0 |
| C | 0 | 2 | 2 |
| D* | 15 | 12 | 27 |
| E | 1 | 2 | 3 |
|  | 16 | 16 | 32 |

$$
I F=\frac{U G+L G}{N}=\frac{27}{32}=0.84
$$

$$
I D=\frac{U G-L G}{n}=\frac{3}{11}=0.27
$$

## ITEM No. 27

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A* | 16 | 9 | 25 |
| B | 0 | 1 | 1 |
| C | 0 | 0 | 0 |
| D | 0 | 6 | 6 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
I F=\frac{U G+L G}{N}=\frac{25}{32}=0.78
$$

$$
I D=\frac{U G-L G}{n}=\frac{7}{11}=0.63
$$

ITEM No. 26

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 0 | 0 | 0 |
| C $^{*}$ | 14 | 14 | 28 |
| D | 2 | 1 | 3 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{28}{32}=0.87 \\
& I D=\frac{U G-L G}{n}=\frac{0}{11}=0
\end{aligned}
$$

## ITEM No. 28

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 1 | 1 |
| B | 0 | 1 | 1 |
| C | 0 | 0 | 0 |
| D $^{*}$ | 16 | 14 | 30 |
| E | 0 | 0 | 0 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{30}{32}=0.93 \\
& I D=\frac{U G-L G}{n}=\frac{2}{11}=0.18
\end{aligned}
$$

## ITEM No. 29

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 1 | 5 | 6 |
| B* $^{*}$ | 14 | 8 | 22 |
| C | 1 | 1 | 2 |
| D | 0 | 1 | 1 |
| E | 0 | 1 | 1 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{22}{32}=0.68 \\
& I D=\frac{U G-L G}{n}=\frac{6}{11}=0.54
\end{aligned}
$$

## ITEM No. 30

|  | UG | LG | UG+LG |
| :---: | :---: | :---: | :---: |
| A | 0 | 0 | 0 |
| B | 0 | 0 | 0 |
| C | 0 | 0 | 0 |
| D | 0 | 0 | 0 |
| $\mathrm{E}^{*}$ | 2 | 1 | 3 |
|  | 16 | 16 | 32 |

$$
\begin{aligned}
& I F=\frac{U G+L G}{N}=\frac{3}{32}=0.09 \\
& I D=\frac{U G-L G}{n}=\frac{1}{11}=0.09
\end{aligned}
$$

| NO. | Testees | SCORE AWAL-AKHIR |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | AWAL | Testees | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | AKHIR |
| 1 | SS1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 12 | SS1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 11 |
| 2 | SS2 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 10 | SS2 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 8 |
| 3 | SS3 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 6 | SS3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 5 |
| 4 | SS4 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 11 | SS4 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 6 |
| 5 | SS5 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 14 | SS5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 12 |
| 6 | SS6 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 | SS6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 12 |
| 7 | SS7 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 13 | SS7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 8 | SS8 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 12 | SS8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 9 | SS9 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 14 | SS9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 10 | SS10 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 14 | SS10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 11 | SS11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 13 | SS11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 11 |
| 12 | SS12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 13 | SS12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 11 |
| 13 | SS13 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 13 | SS13 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 10 |
| 14 | SS14 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 13 | SS14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 11 |
| 15 | SS15 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 12 | SS15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 11 |
| 16 | SS16 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 13 | SS16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 17 | SS17 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 14 | SS17 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 7 |
| 18 | SS18 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 14 | SS18 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 19 | SS19 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 14 | SS19 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 10 |
| 20 | SS20 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 | SS20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 11 |
| 21 | SS21 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 | SS21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 22 | SS22 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 13 | SS22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 10 |
| 23 | SS23 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 14 | SS23 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 24 | SS24 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 13 | SS24 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 25 | SS25 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 14 | SS25 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |


| NO. | Testees | SCORE AWAL-AKHIR |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | AWAL | Testees | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | AKHIR |
| 26 | SS26 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 14 | SS26 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 11 |
| 27 | SS27 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 12 | SS27 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 6 |
| 28 | SS28 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 15 | SS28 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 29 | SS29 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 10 | SS29 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |
| 30 | SS30 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 12 | SS30 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 11 |
| 31 | SS31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | SS31 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 7 |
| 32 | SS32 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 | SS32 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 9 |
| 33 | SS33 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 15 | SS33 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 9 |


|  |  | ODD- EVEN ITEM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| NO. | Testees | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | X | $\begin{gathered} \hline \text { gj1 } \\ 1,3- \\ 17 \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { gnp } \\ 2,4- \\ 30 \\ \hline \end{gathered}$ |
| 1 | SS1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 23 | 13 | 11 |
| 2 | SS2 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 18 | 11 | 9 |
| 3 | SS3 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 11 | 7 | 4 |
| 4 | SS4 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 17 | 9 | 8 |
| 5 | SS5 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 26 | 14 | 12 |
| 6 | SS6 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 27 | 15 | 12 |
| 7 | SS7 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 25 | 12 | 13 |
| 8 | SS8 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 24 | 12 | 12 |
| 9 | SS9 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 | 13 | 13 |
| 10 | SS10 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 | 13 | 13 |
| 11 | SS11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 24 | 11 | 13 |
| 12 | SS12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 24 | 11 | 13 |
| 13 | SS13 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 23 | 11 | 12 |
| 14 | SS14 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 24 | 11 | 13 |
| 15 | SS15 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 23 | 11 | 12 |
| 16 | SS16 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 25 | 12 | 13 |
| 17 | SS17 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 21 | 11 | 10 |
| 18 | SS18 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 | 13 | 13 |
| 19 | SS19 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 24 | 12 | 12 |
| 20 | SS20 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 26 | 14 | 12 |


| NO. | Testees | ODD- EVEN ITEM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | X | $\begin{gathered} \mathrm{gjl} \\ 1,3- \\ 17 \end{gathered}$ | $\begin{gathered} \hline \text { gnp } \\ 2,4- \\ 30 \end{gathered}$ |
| 21 | SS21 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 27 | 15 | 12 |
| 22 | SS22 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 23 | 11 | 12 |
| 23 | SS23 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 | 13 | 13 |
| 24 | SS24 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 25 | 13 | 12 |
| 25 | SS25 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 | 13 | 13 |
| 26 | SS26 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 25 | 12 | 13 |
| 27 | SS27 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 18 | 11 | 7 |
| 28 | SS28 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 27 | 14 | 13 |
| 29 | SS29 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 22 | 12 | 10 |
| 30 | SS30 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 23 | 10 | 13 |
| 31 | SS31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 9 | 5 | 4 |
| 32 | SS32 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 24 | 12 | 12 |
| 33 | SS33 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 24 | 12 | 12 |
|  | TOTAL | 29 | 5 | 30 | 31 | 28 | 30 | 32 | 15 | 15 | 31 | 30 | 30 | 23 | 31 | 21 | 27 | 11 | 31 | 29 | 30 | 28 | 28 | 31 | 26 | 28 | 29 | 26 | 31 | 23 | 3 | 762 | 389 | 376 |


| NO. | Testees | TEST ITEM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | X |  |
| 1 | SS6 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 27 |  |
| 2 | SS21 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 27 |  |
| 3 | SS28 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 27 |  |
| 4 | SS5 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 26 |  |
| 5 | SS9 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 |  |
| 6 | SS10 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 | \% |
| 7 | SS20 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 26 | 2 |
| 8 | SS23 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 | $Q$ |
| 9 | SS25 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 | $0$ |
| 10 | SS18 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 26 |  |
| 11 | SS7 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 25 |  |
| 12 | SS16 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 25 |  |
| 13 | SS26 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 25 |  |
| 14 | SS24 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 25 |  |
| 15 | SS8 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 24 |  |
| 16 | SS11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 24 |  |
| 17 | SS12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 24 |  |


| NO. | Testees | TEST ITEM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | X |  |
| 18 | SS14 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 24 |  |
| 19 | SS19 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 24 |  |
| 20 | SS32 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 24 |  |
| 21 | SS33 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 24 |  |
| 22 | SS1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 23 |  |
| 23 | SS13 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 23 |  |
| 24 | SS15 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 23 |  |
| 25 | SS22 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 23 | $\frac{1}{2}$ |
| 26 | SS30 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 23 | 込 |
| 27 | SS29 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 22 | $Q$ |
| 28 | SS17 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 21 | 0 |
| 29 | SS2 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 18 | $\xi$ |
| 30 | SS27 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 18 |  |
| 31 | SS4 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 17 |  |
| 32 | SS3 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 11 |  |
| 33 | SS31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 9 |  |
| UG |  | 16 | 1 | 15 | 16 | 16 | 16 | 16 | 10 | 10 | 16 | 16 | 15 | 12 | 16 | 11 | 16 | 4 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 15 | 14 | 16 | 16 | 14 | 2 | 762 |  |
| LG |  | 12 | 3 | 14 | 14 | 11 | 13 | 15 | 5 | 5 | 14 | 13 | 14 | 10 | 14 | 10 | 10 | 7 | 14 | 12 | 13 | 11 | 11 | 14 | 9 | 12 | 14 | 10 | 14 | 8 | 1 |  |  |
| TOTAL |  | 28 | 4 | 29 | 30 | 27 | 29 | 31 | 15 | 15 | 30 | 29 | 29 | 22 | 30 | 21 | 26 | 11 | 30 | 28 | 29 | 27 | 27 | 30 | 25 | 27 | 28 | 26 | 30 | 22 | 3 |  |  |

SECOND YEAR'S DISCUSSION TABLE

| Item | UG | LG | IF | Category | Criteria | ID | REMARK |  | r tabel | r hitung | Criteria |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | 16 | 12 | 0.87 | Easy | Rejected | 0.36 | Low DP | Accepted | 0.3440 | 0.43 | Valid |  |
| 2 | 1 | 3 | 0.59 | Middle | Revised | - | Negative DP | Rejected | 0.3440 |  | 0 | Invalid |
| 3. | 15 | 14 | 0.90 | Easy | Rejected | 0.09 | Low DP | Revised | 0.3440 | 0.44 | Valid |  |
| 4. | 16 | 14 | 0.93 | Easy | Rejected | 0.18 | Low DP | Revised | 0.3440 | 0.80 | Valid |  |
| 5. | 16 | 11 | 0.84 | Easy | Rejected | 0.45 | Low DP | Accepted | 0.3440 | 0.52 | Valid |  |
| 6. | 16 | 13 | 0.71 | Easy | Rejected | 0.27 | Low DP | Revised | 0.3440 | 0.79 | Valid |  |
| 7. | 10 | 15 | 0.95 | Easy | Rejected | 0.09 | Low DP | Revised | 0.3440 | 0.60 | Valid |  |
| 8. | 10 | 5 | 0.46 | Middle | Revised | 0.45 | Low DP | Accepted | 0.3440 | 0.45 | Valid |  |
| 9. | 16 | 5 | 0.46 | Middle | Revised | 0.45 | Low DP | Accepted | 0.3440 | 0.37 | Valid |  |
| 10. | 15 | 14 | 0.93 | Easy | Rejected | 0.18 | Low DP | Revised | 0.3440 | 0.80 | Valid |  |
| 11. | 12 | 13 | 0.90 | Easy | Rejected | 0.27 | Low DP | Revised | 0.3440 | 0.79 | Valid |  |
| 12. | 16 | 14 | 0.90 | Easy | Rejected | 0.09 | Low DP | Revised | 0.3440 | 0.41 | Valid |  |
| 13. | 11 | 10 | 0.68 | Middle | Revised | 0.18 | Low DP | Revised | 0.3440 | 0.38 | Valid |  |
| 14. | 16 | 14 | 0.93 | Easy | Rejected | 0.18 | Low DP | Revised | 0.3440 | 0.40 | Valid |  |
| 15. | 4 | 10 | 0.65 | Middle | Revised | 0.09 | Low DP | Revised | 0.3440 |  | -10 | Invalid |
| 16. | 16 | 10 | 0.81 | Easy | Rejected | 0.84 | Low DP | Accepted | 0.3440 | 0.82 | Valid |  |
| 17. | 16 | 7 | 0.34 | Middle | Revised | - | Negative DP | Rejected | 0.3440 |  | -17 | Invalid |
| 18. | 16 | 14 | 0.93 | Easy | Rejected | 0.18 | Low DP | Revised | 0.3440 | 0.22 | Invalid |  |
| 19. | 16 | 12 | 0.87 | Easy | Rejected | 0.36 | Low DP | Accepted | 0.3440 | 0.36 | Valid |  |
| 20. | 16 | 13 | 0.90 | Easy | Rejected | 0.27 | Low DP | Revised | 0.3440 | 0.21 | Invalid |  |
| 21. | 16 | 11 | 0.82 | Easy | Rejected | 0.45 | Low DP | Accepted | 0.3440 | 0.66 | Valid |  |


| 22. | 16 | 11 | 0.82 | Easy | Rejected | 0.45 | Low DP | Accepted | 0.3440 | 0.86 | Valid |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. | 15 | 14 | 0.93 | Easy | Rejected | 0.18 | Low DP | Revised | 0.3440 | 0.43 | Valid |
| 24. | 14 | 9 | 0.87 | Easy | Rejected | 0.83 | Low DP | Accepted | 0.3440 | 0.67 | Valid |
| 25. | 16 | 12 | 0.84 | Easy | Rejected | 0.27 | Low DP | Revised | 0.3440 | 0.41 | Valid |
| 26. | 16 | 14 | 0.87 | Easy | Rejected | 0 | Low DP | Rejected | 0.3440 | 0.25 | Invalid |
| 27. | 14 | 10 | 0.78 | Easy | Rejected | 0.63 | Low DP | Accepted | 0.3440 | 0.15 | Invalid |
| 28. | 2 | 14 | 0.93 | Easy | Rejected | 0.18 | Low DP | Revised | 0.3440 | 0.40 | Valid |
| 29. | 16 | 8 | 0.68 | Middle | Revised | 0.54 | Low DP | Accepted | 0.3440 | 0.41 | Valid |
| 30. | 2 | 1 | 0.09 | Difficult | Accepted | 0.09 | Negative DP | Revised | 0.3440 | 0.01 | Invalid |
|  |  |  |  | 22 Easy | 22 Rejected |  | $\begin{gathered} 3 \text { Negative } \\ D P \end{gathered}$ | 2 Rejected |  |  | 22 valid |
|  |  |  |  | 7 Middle | 7 Revised |  |  | 1 Revised |  |  |  |
|  |  |  |  | 1 Difficult | 1 Accepted |  | 11 Low DP | 11 Accepted |  |  | 8 Invalid |

## B. Discussion

In this research, the researcher wanted to know how the standardization of the English multiple-choice test in the even semester of first and second year at SMAN 3 Palopo observed from researcher analysed the criterion validity, internal reliability, items difficulty and discrimination power.

An evaluation techniques is said has a high validity (called valid) if the test could be completely measure certain capabilities expected. In analyzing the test items, the researcher found the test of the first year SMAN 3 Palopo had 18 items were valid ( $6,7,9,10,13,16,19,20,21,22,2324,25,26,27,28,31,34)$ and 16 items were not valid $(1,2,3,4,5,8,11,12,14,15,17,18,29,30,32,33)$. It implied only 18 items could measure the expected competency of the teacher and there were 16 items could not measure the expected competency. Next, the validity of the test in the second year SMAN 3 Palopo had 22 items were valid (1, $3,4,5,6,7,8,9,10,11,12,13,14,16,19,21,22,23,24,25,29,30)$ and 8 items were invalid ( $2,15,17,18,20,26,27,30$ ). It counted only 22 items could measure the expected competency of the teacher and there were 8 items could not measure the expected competency. That was the validity of the test based on the rpbis formula by using Microsoft Excel Application.

Based on the finding, the multiple choice test of first year had a minimum of items validity same with the Arif Purnomo's finding showed that 23 test items were invalid and only 12 items were valid. ${ }^{61}$

The researcher found that the test reliability of the first year SMAN 3 Palopo was 1.01 , it showed the evaluated test was highly reliable because 1.01 > 0.3 and belong to very high category. The second year test reliability was $1.51>$ 0.3 and belong to very high category. 0.3 was the number of $r_{\text {tabel }} . r_{\text {tabel }}$ was the coefficient table of product relation " r " moment. One of the table functions was basically for instrument validation. It used to compare the $r_{\text {tabel }}$ and $r_{\text {hitung }}$ scores. The score of $r_{\text {tabel }}$ could be seen on the appendix 9 .

Weiresma and Jurs said that, if the coefficient colleration in every single test was high, the test item would more valid. So if the $r_{\text {hitung }}>r_{\text {table }}$, the test item could be mentioned as a valid and reliable test. ${ }^{62}$

The next was item difficulty level. Test is better if the level of the test is balanced. According to Sudjana, preferably a package of questions given to students has a delicate balance between difficult, medium, and easy with the ratio 3: 4: 3 or $2: 5: 3 .{ }^{63}$

Regarding on the findings, the difficult test of first year there were 23 items were in easy level with the rejected criteria $(1,2,3,6,7,9,10,13,16,17$,

[^27]$20,21,22,23,24,25,26,27,28,29,30,31,32), 7$ items were in middle level needed to revise $(5,8,12,18,19,33,34)$ and there 4 items were in difficult level are accepted $(4,11,14,15)$.

In the test of second year SMAN 3 Palopo showed that there were 22 items in easy level with the rejected category $(1,3,4,5,6,7,10,11,12,14,16$, $18,19,20,21,22,23,24,25,26,27,28), 7$ items in middle level needed to revise $(2,8,9,13,15,17,29)$ and 1 item (item number 30) in difficult level and accepted category. These items difficulty result were showing that the test items had unbalanced proportion as the Sudjana explanation. The previous study from Rahmani in Endah thesis stated showed unbalanced proportion item difficulty there were $40 \%$ difficult, $55 \%$ middle and $5 \%$ were easy. ${ }^{64}$

After finding the item difficulty of the test, the researcher moved to the discrimination power of the test. Regarding the research findings, there were 27 items (1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 19, 20, 22, 23, 24, 25, 26, 27, 28, 29, 33, and 34) had low discrimination power. 20 items (3, 6, 7, 8, 9, 10, 12, $13,15,17,19,20,24,25,26,27,28,29,33$, and 34 ) needed to revise, and 1 item is accepted (item number 5) and 6 items (1,2,11, 16, 22, 23) are rejected. There were 7 items had negative discrimination power $(4,14,18,21,30,31,32)$ are rejected. It showed the 13 items are rejected totally.

[^28]In the test of second year of SMAN 3 Palopo found there were 27 Low Discrimination Power. 11 items are accepted ( $1,5,8,9,16,19,20,21,23,27$, and 29). 15 needed to revise $(3,4,6,7,10,11,12,13,14,15,18,20,23,25,28)$ and 1 item is rejected (item number 26), 2 items in negative discrimination power ( 2 , 17) are rejected and 1 item in negative Discrimination Power needed to revise (item number 30).

By referring to the sources which has been described before, good tests are matters that fulfill the requirements of validity, reliability, good discrimination power and item difficulty. Before the teachers give the test items to students, it is strongly important to identify which items are answered correctly by the more able testees and badly by the less able testees. Not only the validity and reliability but all of the test items should be examined from the point of view of their difficulty level and their level of discrimination as well as the distracters for multiple-choice test items.

Madsen stated that well-made tests of English could help students in at least two ways. First of all, such tests could help create positive attitudes toward your class. In the interest of motivation and efficient instruction, teachers almost universally aim at providing positive classroom experiences for their students. A second way that English tests could benefit students is by helping them master the language. ${ }^{65}$

[^29]The good English tests could help the positive attitudes toward instruction by giving students a sense of accomplishment and a feeling that the teacher's evaluation of them matches what teacher has taught them. Good English test would help students learn the language by requiring them to try studying hard, emphasizing course objectives, and showing the lacks of their knowledge where they needed to improve. Test on teaching and learning could give the advantages for the students and the teachers. Furwana said that if a test is regarded as important, if the stakes are high, preparation for it could come to dominate all teaching and learning activities. And if the test content and testing techniques are at variance with the objectives of the course, there is likely to be harm: backwash. ${ }^{66}$
${ }^{66}$ Dewi Furwana, Language Testing and Evaluation, English Education Graduate Program Makassar State University Makassar, Unpublished, 2011, p. 1

## CHAPTER V

## CONCLUSION AND SUGGESTION

## A. Conclusion

Regarding the research findings after analyzing the multiple choice tests that has been tested on Tuesday, $4^{\text {th }}$ June 2018 at SMAN 3 Palopo, the researcher concludes;

The multiple choice tests of the first and second year at SMAN 3 Palopo have low standardization of multiple choice test and need improvement. Some items number of the multiple choice test are rejected and need to revise. Based on interview section, the English teachers at SMAN 3 Palopo did not make blueprint as a lattice in designing and constructing the test items. The researcher also concludes the quantitative analysis with the percentage as follows:

## a. First Year

The reliability coefficient of the first year test is 1.01 it showed the evaluated test is highly reliable. According to the Microsoft Excel findings, the validity of the test in the first year SMAN 3 Palopo have 18 items are valid (52.94\%) and 16 items are invalid (47.05\%). The result showed that there are 23 items are in easy level with the rejected criteria (67.64\%), 7 items are in middle level need to revise ( $20.58 \%$ ) and there 4 items are in difficult level are accepted (11.76\%). In item discrimination of the test, there are 27 items have low
discrimination power ( $79.41 \%$ ) and 7 items have negative discrimination power (20.58\%).

## a. Second Year

The multiple choice test of the second year SMAN 3 Palopo have very high category of reliability is 1.51 . Regarding the Excel calculation, in the second year found 22 items are valid ( $73.33 \%$ ) and 8 items invalid (26.66\%). Next, the item difficulty level of each number of the multiple-choice test. The finding's table described that there are 22 items in easy level with the rejected ( $73.33 \%$ ), 7 items in middle level need to revise ( $23.33 \%$ ) and 1 item in difficult level and accepted category ( $3.33 \%$ ). The researcher found that there are 11 items have low discrimination power with accepted category (36.66\%), 15 items have low Discrimination Power need to revise ( $50 \%$ ) and 1 item is rejected (3.33\%), 2 items in negative discrimination power are rejected (6.66\%) and 1 item is negative Discrimination Power need to revise (3.33\%).

## B. Suggestion

From the conclusion above, the researcher would like to give some suggestions. These are some suggestion:

1. The teachers should make the blueprint before designing the multiple choice test for the students, because it could help the teacher construct the test without afraid the test is not appropriate with the syllabi and the target expected competency can be reached by the students. It strongly important to
improve the teacher competency in designing qualified test based on the principles of language testing assessment, so the chairman of the school should support them through the teacher training activity related to design and construct the test in order to the teachers competency in designing test increased.
2. For the students, the students should aware how important the test for themselves in the future. If the school test is not done seriously, it will make the teachers give the wrong assessment because the teachers can not see the real competency that students have after teaching-learning process.
3. For the school, please pay attention to the place and time of the test because it affects the students in working on the test given by the teachers.
4. For other researcher, please do more research in this field by doing further research.

## BIBLIOGRAPHY

Allison, Desmond. 1999. Language Testing And Evaluation (An Introductory Course). Kent Ridge Crescent: Singapore University Press.

Arifin, Zainal. 2011. Evaluasi Pembelajaran. Bandung: Remaja Rosda Karya.
Airasian, Peter W. and Michael K. Russell. 2008. Classroom Assessment. New York: McGraw-Hill Companies. Inc.

Arikunto, Suharsimi. 2007. Dasar-Dasar Evalusai Pendidikan Edisi Revisi. Jakarta: Bumi Aksara.

Alderson, J. Charles Caroline Clapham, and Diane Wall. 1995. Language Test Construction and Evaluation, New York: Cambridge University Press.

Brown, H Douglas. 2003. Language Assessment Principles and Classroom Practice. California: Longman Group.

Burton, Steven J. Et Al. 1991. How To Prepare Better Multiple-Choice Test Items: Guidelines For University Faculty, Brigham Young University Testing Services And The Department Of Instructional Science.

Brown \& Abeywickrama. 2010. Language Assessment: Principles and Classroom Practice. Pearson Education. Inc. United Stated of America.

Burton, Steven J. Et Al. 1991. How to Prepare Better Multiple-Choice Test Items: Guidelines for University Faculty, Brigham Young University Testing Services and the Department of Instructional Science.

Coombe,Christine and Peter Davidson, Et Al (Ed.). 2012. The Cambridge Guide to Second Language Assessment. New York: Cambridge University Press.

Creswell, John W. Educational Research (Planning, Conducting, and Evaluating, Quantitative and Qualitative Research). 4th edition.

Furwana, Dewi. 2011. Language Testing and Evaluation. English Education Graduate Program Makassar State University Makassar.

Fitriyanti, Shaumi. 2014. Analyzing The Content Validity Of English Summative Tests In Vocational Schools. Skripsi, Jakarta, Program Sarjana (S1): Faculty Of Tarbiyah And Teachers Training Syarif Hidayatullah State Islamic University.

Fulcher, Glen and Fred Davidson. 2007. Language Testing and Assessment.

Gronlund, Norman E. 1981. Measurement and Evaluation In Teaching. New York: Macmillan Publishing Co., Inc.
H. Tran, Thu. 2012. Second Language Assessment for Classroom Teachers, Midtesol Paper, Missouri University Of Science And Technology, Rolla, Missouri, Usa.

Harris, David P. Testing English as a second Language. New York: McGraw-Hill Book Company

Heaton, J. B. 1988. Writing English Language Tests. New York: Longman Group UK Limited. New Edition.

Hopkins, Charles D. and Richard L. Antes. 1990. Classroom Measurement and Evaluation. Illinois: F.E. Peacock Publishers. Inc. 3rd Edition.

Kizlik, Bob. Measurement, Assesment, and Evaluation in Education. Online: http://www.adprima.com/measurement.htm, accessed on 30th Januari 2018

Khaerudin. 2015. Kualitas Instrumen Tes Hasil Belaja. Madaniyah Journal.Vol. 2 Edisi IX.

Khodirin. 2013. Content Validity of the English Summative Test in the First Year of SMK Lingga Kencana Depok. Skripsi of UIN Syarif Hidayatullah. Jakarta: UIN Syarif Hidayatullah Jakarta. unpublished.

Madsen. 1983. Techniques in Testing. New York: Oxford University Press
Mudjijo. 1995. Tes Hasil Belajar. Jakarta : Bumi Aksara
Madrapi, Djemari. 2003. Desain dan Penilaian Pembelajaran Mahasiswa, Journal, Vol. 16 Universitas Gajah Mada, Yogyakarta, , online: https://www.google.co.id/amp/s/yogapermanawijaya.wordpress.com/201 4/10/16pengertian-pengukuran-measurement-penilaian-assessment-dan-evaluasi-evaluate-dalam-pendidikan/amp, accessed on 30th Januari 2018

Overton, Terry. 2008. Assssing Learners with Special Needs: An Applied Approach (7th Edition). Pearson Education. Inc. University of TexasBrownsville.

Purnomo, Arif. 2007. Kemampuan Guru Dalam Merancang Tes Berbentuk Pilihan Ganda Pada Mata Pelajaran Ips Untuk Ujian Akhir Sekolah (Uas). Lembar Ilmu Kependidikan Jilid 36, No 1. Semarang : Universitas Negeri Semarang.

Panduan Analisis Butir Soal, www.dikmenum.go.id

Putra, Sitiatava Rizema. 2013. Desain Evaluasi Belajar Berbasis Kinerja. Jogjakarta: Diva Press. 1st Edition.

Purwanto, Ngalim. 2004. Prinsip-Prinsip Dan Tehnik Evaluasi Pengajaran. Bandung: Remaja Rosdakarya.

Putri Novi Arti, Endah. 2015. Kemampuan Guru Mata Pelajaran Biologi Dalam Pembuatan Soal Hot (Higher Order Thinking) Di Sma Negeri 1 Wonosari Klaten. Naskah Publikasi. Surakarta. Program Sarjana (S1): Universitas Muhammadiyah Surakarta.

Sikki, Endang Asriyanti Amin Et Al. 2013. The Competence Of Primary School English Teachers In Indonesia, Journal Of Education And Practice Vol.4, No.11. Makassar, State University Of Makassar.

Sudijono, Anas. 1996. Pengantar Evaluasi Pendidikan. Jakarta : Raja Grafindo Persada.

Sudjana, Nana. 1989. Penilaian Hasil Proses Belajar. Bandung: Remaja Rosda Karya

Supriadi, Gito 2007. Kemampuan Guru Dalam Mengevaluasi Hasil Blajar Pendidikan Agama Islam Di Madrasah Tsanawiyah Se-Kota Palangka Raya. Tesis. Yogyakarta, Program Pascasarjana, Universitas Negeri Yogyakarta.

Surapranata, Sumarna. 2007. Panduan Penulisan Tes Tertulis. Bandung : Remaja Rosda Karya.

Sudijono, Anas. 2011, Pengantar Evaluasi Pendidikan. Jakarta: Rajawali.
Tantini, Ariani Fera. 2015. Studi Eksplorasi Tentang Kemampuan Guru Dalam Pembelajaran Ips Di Smp Negeri Se-Kecamatan Kalasan Sleman Yogyakarta, Skripsi, Yogyakarta, Program Sarjana (S1): Universitas Negeri Yogyakarta.

Tentang Standar Nasional Pendidikan Peraturan Pemerintah Republik Indonesia. Nomor 19 Tahun 2005 Pasal 28. Ayat 3. pdf.

Tim Penyusun Pusat Bahasa Departemen Pendidikan Nasional. Kamus Besar Bahasa Indonesia Edisi Kelima. Jakarta: Balai Pustaka. 2005

Wiersma, William and Stephent G Juts. 1990. Educational Measurement and Testing. Boston: Allyn and Bacon.


| NO | JAWABAN | NO | JAWABAN |  | NO | JAWABAN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 C |  | 11/ |  | 31.8 | 21. |  |
| $2 B$ |  | 12D |  | 22 c | 22 E |  |
| $3 D$ |  | 134. |  | 33 D | 231 |  |
| $4 B$ |  | 146 |  | 3413 | 24 B |  |
| 5 D |  | 15 E |  | 35 C | 25p |  |
| 6 E |  | 164 |  |  | 26B |  |
| 7 B |  | 17C |  |  | 27D |  |
| 8 C |  | 18A |  |  | 28B |  |
| 9 D |  | 19A |  |  | 296 |  |
| 104? |  | 20C |  |  | 30.4 |  |

## EMBAR JAWABAN ESSAY:





APPENDIX 3. SAMPLE OF STUDENT IN THE FIRST YEAR WHO GOT LOWER SCORE


## PEMERINTAH PROVINSI SULAWESI SELATAN DINAS PENDIDIKAN

 UPT SMA NEGERI 3 PALOPOAlamat : Jalan Andi Jemma No. 52 Kota Palopo
LEMBAR JAWABAN ULANGAN SEMESTER GENAP TAHUN PELAJARAN 2017 / 2018

```
\(>\) NAMA SISWA
- SYAHRANM.PWI.CAMYAR
PAKET
\(>\) KELAS
\(=\) x1M1PA?
.........
MATA PELAJARAN \(=\). RAHA......!ng
LEMBAR JAWABAN PG = DI Isi dengan huruf kapital
```

| NO | JAWABAN |  |
| :--- | :---: | :---: |
| 1 | $P$ | $C$ |
| 2 | $C$ | $X$ |
| 3 | $B$ |  |
| 4 | $B$ |  |
| 5 | $C$ | $\checkmark$ |
| 6 | $E$ | $\checkmark$ |
| 7 | $P$ | $\square$ |
| 8 | $C$ | $X$ |
| 9 | $A$ |  |
| 10 | $A$ |  |


| NO | JAWABAN |  |
| :---: | :---: | :---: |
| 11 | $C$ | $\square$ |
| 12 | $C$ |  |
| 13 | $P$ | $\square$ |
| 14 | $D$ | $\square$ |
| 15 | $B$ |  |
| 16 |  | $D$ |
| 17 | $A$ |  |
| 18 | $C$ |  |
| 19 | $D$ |  |
| 20 | $A$ |  |


| NO | JAWABAN |
| :---: | :---: |
| 21 | $C^{\sim}$ |
| 22 | A |
| 23 | A 2 |
| 24 | Eレ |
| 25 | DL |
| 26 |  |
| 27 | A 1 |
| 28 | D L |
| 29 | $B \sim$ |
| 30 | A $X$ |

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PEMERINTAH PROVINSI SULAWESI SELATAN DINAS PENDIDIKAN UPT SMA NEGERI 3 PALOPO Alamat : Jalan Andi Jemma No. 52 Kota Palopo
LS
LEMBAR JAWABAN ULANGAN SEMESTER GENAP TAHUN PELAJARAN 2017 / 2018
NAMA SISWA $=$..faran.........ghaka
NAMA SISWA $=$..faran.........ghaka
KELAS $\quad=\ldots$... M! M A
MATA PELAJARAN $=$. .hahons......nggrs
LEMBAR JAWABAN PG = Di isi dengan huruf kapital



## PEMERINTAH PROVINSI SULAWESI SELATAN <br> UPT SMA NEGERI 3 PALOPO

SECOND SEMESTER EXAMINATION 2017/2018

| Subject : English | H/A 1 | $=36$ |
| :--- | ---: | :--- |
| CLASS : $X$ | 2 | 235 |

Duration: 90 Minutes 3
e. put the bananas in their mouths
3. What did the chief's wife suggest ? a. to peel the bananas first b. to food the bananas in the mouth c. to fast that day.
d. to distribute the bananas beforehand
e. to eat the bananas immediatelly
4. When did the fasting end ?
a. the monkeys were successfully fasting
b. the mongkeys ended up in chaos
c. the fasting ended before it was supposed to.
d. the monkeys planned to fast again. e. the fasting ended when the sun set
5. How many characters are mentioned in The story ?
a. One character
b. Two characters
c. Three characters
d. Four characters
e. Five characters
6. I haven't eaten anything. ...
a. for long days
b. tomorrow
c. last year
d. weekend all
e. since last night
7. we use past continous tense to .... a. express an action in the past
b. show an action which continued for some time in the past.
c. show habitual actions in the present
d. show continuing actions in the present
e.express actions completed in the past

8 My sister was still studying when a. mother is cooking
b. my brother reparing the bike
c. I went to bed last night
d. The clock strikes twelve
e. 1 bring her dinner
9. We will visit you ... I promise.
a. For week end
b. since weekend
a. last weekend
d. this weekend
e. all last weekend
10. Hasan . . . his father's watch, so he He bougtht a new one.
a. Broke
b. Crashed
c. Forgot
d. Sold
e. Lent
11. Have you... to the top of the empire State building.
a. Flown
b. Sat up
c. Grown up
d. Gone up
e. Break up
12.In fact, I've just . . . back from there.
a. been
b. gone
c. came
d. come
e. going
13. The two cousins ... at the airport for The first time.
a. Met
b. Welcome
c. Saw
d. Knew
e. Liked
14. The dog . . . in the middle of the kitchen floor,looking at the door.
a. Put
b. Ran
c. Stood
d. Barked
e. Guarded
15. We ... at the library foe three hours Yesterday.
a. Learnt
b. Studied
c. Reviewed
d. Lived
e Borrowed

This text is for questions number $16-19$.
To apply for a new driver's license, come to BRI Bank to ... (16)a form. Then, bring the form you' ve . . (17)to the drivers license Office on Monday through Friday ... (18) $08.00 \mathrm{a} . \mathrm{m}$. and $2.30 \mathrm{p} . \mathrm{m}$.You will take a written test and a driving test after you.
19) in the forms from the drivers license office
There will be a minimal fee.
16. a.buy d.bought b. buys e. have bought c. buying
17. a. complete d. completing b. completes e. had completed
c. completed
18. a. between d. after b. next to e. before c. around
19. a. fill
d. get b. sell c. read

READING 2
This text is for number 20 - 24.
On December 19-1948, the duch launched Operate Kraat, a second military invasion designed to cruch the new Indonesian Republic once and for all. The invansion was initiated with an airbone assault on the Republican capital city. on the Republican capital city. Yogyakarta Presiden Soekarno ordered the armed forces iunder General Soedirman (as the commander in chief )to launch a guerilla Campaign in the countryside, while he and other key leader as Hatta and Sjahril ,allowedthemselves to be taken prisoner by The Duch.
General Soedirman,or Pak Dirman,as he was usually called,led his troops to wage Guerilla warfare against the Duch in YogyaKarta Solo,Madium, and Kediri for about se Ven month. Fron his headquarters deepin the mountains, Pak Dirman commanded mili tary activities throughout Java,including a show of force in Yogyakarta on March 1,1949 Soon,the news of the defeats of the Duch forces against the guerillas spread overseas,and the cuch were forced to negotiate with the indonesians
Eventually the roem-Royen agreement

Was signed, and according to this treaty, the Duch had to release the Republican Leadership and return the area surrounding Yogyakarta to Republican control in June * 1949. When the Duch begen with drawing Their forces in July 1949, Pak Dirman was recalled to Yogyakarta and was forbidden to Fight further.
20. The second invention of the Duch to Indonesi lasted for ....
a. Five months
b. Sixmont'hs
c. Seven months
d. Eigh months
e. A year
21. Soedirman was....
a. the president
b. the vice 'president
c. the commander in chief of armed forces
d. the army general
e.the founder of Indonesian armed forces
22. The guerilla war took place in these Locations,except . . . .
a. Yogyakarta
b. Solo
c. Madium
d. Kediri
e. Semarang
23. The guerilla warfare ended in...
a. December 1948
b. May 1949
c. June 1949
d. July 1949
c. September 1950
24. Accordingt to Roem-Royen treaty,the Duch had to . . . .
a. Realize Republican leadership and return half of Yogyakarta to the army
b. Realize Republican teadership and return the area surrounding Yogyakarta to republican control
c. Realize the president an retreat immeditially
d. Surrender to the republican armed forces
e. Cease fire immeditially and realize ali indonesian prisoners
25. He drove a way ... he chiecked that The road was clear.
a. When
d. after
b. Before
e. and
c. Until
26. The girl were eating pizza . . . we saw Them this evening.
a. After
d. because
b. When
e. but
c. Where
27. When the sirens sounded, the army .. Launched an attack to allcorners of the City.
a. Soon
d. immeditially
b. Before long
e. next
c. Until
28. The Rio Olympic Games was the ... Sport event in 2016.
a. Smallest
d. tiniest
b. Biggest
c. Worst
29. The august 17-1945 proclamation was The ...event in the history of IndoneSian independence.
a. Important d. more important
b. Importanter e. most important
c. Importantest

This dialoque is for questions number : 30 to 33.

Dion : Hello,Jaka.how are you, buddy?
Jaka : Hi,Dion.I'm great, thanks I did'nt Know that you have comeback. How's Morocco ?
Dion :It's hot, hahaha.I'm glad to be back. I miss Indonesia a lot.
Jaka : You've done a great job there.I'm Proud of you.
Dion : Thank you.Oh,l'veheard about your Promotion too.Congratulations,Jaka I know that you are more than quail Fied to feel the position.
Jaka : Thank you,Dion, You support means A lot to me.
By the way, I have received your Greeting card.It's very nice of you To send it.
Dion : I'm glad you like it.I was sorry I Couldn't congratulate you in person When you were promote,So I send The card instead.
Jaka Well, You are here now, Pal.Let's Have dinner at my house to night We have a lot of catching up to do.
Dion : That sound good. rll bring
30. What is the relationship between Dion

## And Jaka ?

a. An old school friend.
b. A colleague
c. An acquaintance
d. A stranger
e. An oid rivald
31. Where did Dion stay he came back to Indonesia?
a. In Jakarta
b. In Morocco.
c. In Midle east
d. In Europe
e. In Asia
32. What did Dion send to Jaka ?
a. A letter d. A dessert b. A gift e. A postcard c. A greeting card.
33. why didn't Dion congratulate Jaka In person ?
a. Because he was abroad.
b. Because he didn't want to meet Jaka
c. Because he didn't like that Jaka got promosion.
d. Because he was too busy working
e. Because he wanted to send a card Instead.
34. You should keep the milk in the

Reprigerator, . . . . it doesn't go back.
a. Since d. although
b. So that
e. as
c. Because
35.1 waited for my friend . .
a. that she could barely stand
b. until he walked
c. as he was not there
d. as intelligent as you are
e. do not go till then,

## SOAL ULANGAN AKHIR SEMESTER II KELAS XI UNTUK IPA DAN IPS

This text is for questions 1 to 4 .
An elephant is the largest and strongest of all animals. It is a strange looking animal with its thick legs, huge sides and backs, large hanging ears, a small tail, littie eyes, long white tusks and above all it has a long nose, the trunk.
 can squirt it all over its body like a shower bath. It can also Or eise, should lift leaves and puts them, into its mouth. In fact the trunk Rio N., Padang serves the elephant as a long arm and hand. An elephant looks very-clumsy and heavy and yet it can move very Dear Rio. quickly.

The elephant is a very intelligent animal. Its intelligence combined with its great strength makes it a very useful servant to man and it can be trained to serve in varicus
or for hir ginlfricnd way. For this reason I'd, say that there is nothing you can $d$
except forget her and go on with your normal life. Hopetuily ways such as carry heavy loads, hunt for tigers and even Rossa fight.

1. The third paragraph is mainly about the fact that -.
A. elephants are strong
B. elephants can lift logs
C. elephants are servants
D. elephants are very useful
E. elephants must be trained
2. Which of the following is NOT part of the elephant described in the first paragraph?
A Y looke strange.
B. It is heavy.
C. It is wild.
D. It has a trunk
E. It has a small tail.
3. It is stated in the text that the elephant uses the trunk to do the following, EXCEPT --
A to eat
B. to push
C. to drink
D. to carry things
E. to squirt water over the body
4. The trunk is the elephant's peculiar feature .-. (Paragraph 2)
The underlined word is close in meaning to -
A. large
B. strange
C. tough
D. smooth
E. long

Text for question 5 to 7
Dear, Rosa
I am a gry, twenty-eight years old. I have a probiem
with a garl frend. She is thenty five years old. We have been
dating each other for years. since we were high school
datugg each other for years, susce we were high school
each cther. Now have is tome fors. mee very sure that we love
each coher. Now is is tume for me so get marned
Infortunately, her parents never approve of cur relationshyp
over since the very first time. My family, anybow, to sis at
reatly mind. At first I theoght iny gort firiend had the poeser


sre loves her family, waw On Fir une band she said, Tit he 1 . Barle pecter sea no mis.

apprival frowe her porculs.
5. The main idea of the first paragraph is that ...
A. the writer wants to get married
B. the writer has been dating for years
C. the writer has a problem with his girl friend
D. the writer feels sure that they love each other
E. the writer's parents disapprove of his relationship
6. Which of the following seaterices is TRUE according to the text?
A. Rio is not ready to get married.
B. Rio's parents disagree to his marriage
C. Rio and his girl friend often got conflicts.
D. Rio's girl friend didn't really love Ria
E. Rio's girl friend couldn't defend her love for Rio.
7. Why do the girl's parents disapprove of their marriage? Because --
A. they don't like Rio
B. the girl is stall studying
C. Rio is from a different ethnic group.
D. they keep the Kacuese tradition.
E. the girl has chosen another guy.
8. Lita : Fit, which do you like better, singing or dancing? Firria: Well, I'd - than dance
2. better sing
b. have sing
c. prefer singing
d. racher singing
c. rather sing
9. The photographer would rather that we .closer nogether
than we are standing
a. stand
th are sanding
c. standing
d. stood
e. no stand

*y

## ext for question number 11-13.

 the students must wear a cap and a tie One of them showed into the machine and key in your PIN her annoyance. She said that wearing a cap and a tie was (Personnel Identification Number) and the amount of money only suitable for a flag rising ceremony. So, she was against you want If you have enough in your account, the money the rule. Contrary to the girl's opinion, the other student was requested will be issued to you up to a dairy limit. Your glad with it. He said that he didn't mind with the new rule account is automatically debited for the amount your have because wearing a cap and a tie will make the students look drawn out. great and like real educated persons. The first student gave Provided you have a sound credit, you can get a credit the reasons that they would feel uncomfortable and hot. card from a bank and other financial institutions. To obtain Moreover, the classrooms were not air conditioned. The goods or services, you present your card and sign a special second said it wasn't a big problem. He was sure that the voucher. When it receives the voucher, the credit card students would wear them proudly. They would surely be company pays the trader (less a commission) and then sends used to it any way.11. The two students are discussing ...
A. the facilities in school
B. their homework
C. their uniform
D. their friends
E. their family
12. The boy said that he agreed with the new rule in his school.
Which statement shows his agreement?
A. He was not annoyed.
B. He would not obey the rule.
C. He didn't care of the rule.
D. He didn't like wearing a cap and tie.
E. He didn't mind wearing a cap and tie.
13. The boy believed that all students would ...
A. have a high spirit to study
B. solve their own problems
C. care for their environment
D. follow the new rule
E. feel uncomfortable
14. Mira : Hi, Dad, I will be late home because the committee will hold a meeting after class.
Father : It's okay but you must go straight home after the meeting.
Mira: Don't worry, Dad.
Mother: What did Mira say?
Father : She said that she would be late home today.
What is the most possible place where Mira is talking to her father?
A. a hall.
B. her home.
C. The office.
D. Her school,
E. A meeting room.
15. Eka : Are you free today?

Lidya: Yes, what's up?
Eka: Would you like to come with me to see the "Peterpan"
show tonight?
Lidya : Thanks, Td be delighted to. It's my favourite band
What are the speakers going to do?
A. To stay at home.
B. To see Peterpan show
C. To arrange their free time.
D. To watch Peterpan at home.
D. To watch Peterpan at hosne.
you a monthly statement. Depending on the type of card you have, you will either have to pay in full or be able to pay part of what is owed and pay interest on the balance left outstanding.

If you need to make fixed payments at regular intervals, e.g. ror insurance premiums, you can arrange a standing order (sometimes known as a banker's order) so that the bank will do this for you.
16. If you withdraw your money from the cash dispenser the amount of your money will ... as you have drawn out.
A. become more
B. be credited
C. become lost
D. become less
E. be doubled
17. The main purpose of the writer is to ..
A. give the reader information about bank service
B. persuade die readers to have a credit card
C. check the customers' account
D. explain to the reader how to use PIN
E. explain to the customers how to pay their employee's salaries
18. Which of the following is the main idea of the second paragraph?
A. The credit card company pays the traders.
B. The credit card company sends you a monthly statement.
C. Banks and other financial institutions offer us credit cards
to get goods and services.
D. Other financial institutions help the banks to provide credit cards.
E. A voucher is the only way to buy goods.
19. "Many people BOW have a card which enables them ." "(Paragraph. 1).
"enables" means ...
A. forces
B. supports
C. asks
D. allows
E. encourages
20. If you have enough money in your account
A. you can withdraw your money from a cash dispenser
B. you have a special voucher.
C. the bank sends you a monthly statement.
D. you have paid specia! interest.
E. the type of card is acceptable.
21. Tutut: Were you sleeping when I called you last night? Indra : I went to the cinema.
From the dialogue we know that Tutut wanted to know if India ... when she called him.

## A. sleeps

B. slept
C. was sleeping
D. has been sleeping
E. had been sleeping
22. Mawar: This telegram is for my husband. He's out on duty. What do you recommend me to do?
Putri : Why don't you ring him and tell him that a telegram's arrived?
In the dialogue above, Mawar is asking for Putri's ...
A. advice
B. curiosity
C. agreement
D. permission ,
E. information
23. Mrs. Anwar: 1 heard that your son had won a scholarship to Pajajaran University.
Mrs. Budiman : Yes, that's right .... He never ignores our advice and always studies hard.
A. I'm proud of him
B. I prided myself on his success
C. His pride would not let him down
D. Im too proud to have been successful
E. He is a profile of a successful student

This text is for questions 24 to 26.
University of Cambridge
25. Which of the following statements is TRUE?
A. The academic year is held in four seasons in a year.
B. Students in colleges are not members of the university
C. Students must not be in their residence during the terms. D. The students of Cambridge University have holidays in summer.
E. University of Oxford is younger than University of Cambridge.
26. The second paragraph tells the readers about ...
A. an integrated educational entity.
B. social activities in the university
C. the system in Cambridge University.
D. the examination for candidates' degrees.
E. the criteria for the membership of the university.

Questions number 27-29.
I recently took a trip to New Hampshire and had what I would call my first genuine .... (27) hiking up a mountain. I've gone up hiking before but this was without a doubt the best experience of my life. My friend, Sean and Madeline ... (28) some pictures during the trip. We .....(29) 2 hours tright before we reached the summit. The strom clouds were heading right toward us and you could actually see the rain falling from the cloud. It was like a wall of water moving at an alarmingly ... (30) pace ready to engulf us.
27. A. experience

## B. influence

C. experiment
D. expedition
E. Independence
28. A. Bought
B. Brought

Do you plan to study abroad? Don't hesitate. C. Broke Welcome to Cambridge University. Cambridge University, D. Took Welcontintion of higher education, is the second oldest E. Put
an institution Or Britain after the University of Oxford. It
university in Great Britain aftidge.
29. A. have
is located in the city of Cambridge.
B. need
departments, and 31 independent colleges. You know, C. should
although the colleges and the university are separate D.must
corporations, all are parts of an integrated educational entity. E. Will
The university examines candidates for degrees during their
residencies and at the conclusion of their studies. The 30 A . broke
colleges provide their students with lodgings and meals, B. strong assign tutors, and offer social, cultural, and athletic activities. C. long
Every student at the University of Cambridge is a member of D. brigh
Every student at the University or Cambrige in a E. fast
a college.
Let's see its academic year. The academic year is
divided into three terms of approximately eight weeks each: 31-35

Michaelmas (autumn),
(spring). Students required ollege's faculties who maintain 31. Ayahku akan telah sedang mengetik sebunh surat untuk usually members of the college's facuties who mints in their perusahan itu kemarin paga
close relationships with small grong for university exams.
24. The author's purpose of writing the text is ...
A. to review a particular education system
B. to commemorate a particular college
C. to define a particular academic year D. to explain a particular way to study

E to describe a particular institution
32. Para polisi telah menangkap pencuri itu 2 hari yang lalu
33. Kita telah akan membuka rahasia besar itu bersama tahun lalu
34. Para dokter telah sedang memeriksa tanyak pasien selama 5 jam.
35. Pedagang itu akan telah sedang menjual buah segar it pasar nanti malam

## APPENDIX 7

## A. The Teacher of First Year SMAN 3 Palopo

Researcher : Sebelumnya ustadz perkenalkan saya Nurul Ainun Islamia.
Teacher : Nurul Ainun?

Researcher : Iya ustadz, terima kasih atas kesempatannya ustadz, telah mengizinkan saya untuk mengajukan beberapa pertanyaan mengenai UAS yang dilaksanakan beberapa minggu yang lalu. Tapi sebelumnya ustadz, saya mau tahu sudah berapa lama ustadz menjadi guru di SMAN 3 Palopo?
Teacher : Di SMA 3 itu sudah 12 tahun

Researcher

Teacher

Researcher

Teacher

Researcher : Kemudian boleh tau ustadz, siapa yang merancang atau menyusun soal ulangan itu sendiri?

Teacher : Kita sendiri, guru sendiri yang menyusun.
Researcher : Apa kesulitan-kesulitan yang ustadz hadapi saat menyusun soal-soal untuk adik-adik di SMA?

Teacher : kesulitan, tidak terlalu ada kesulitan. Karena kan apa yang kita ajarkan itu yang kita teskan.

Researcher : Apakah setiap ulangan itu sendiri ustadz bersama guru-guru yang lain menbuat kisi-kisi sebelum mendesain soal?

Teacher : Jelas itu kisi-kisi sesuai dengan materi yang kita ujikan berdasarkan silabus kita.

Researcher : Baik selanjutnya ustadz, apakah validitas dari sebuah tes itu penting dalam pembuatan soal?

Teacher : Oh ya sangat-sangat penting. kita harus bisa bagaimana menuntaskan itu materi kalo perlu di ulangi ya kita ulangi pada bagian-bagian yang perlu diulangi.
Researcher : Lalu menurut ustadz sendiri seberapa penting kesesuaian soal terhadap silabus?

| Teacher | : Sangat penting banget, silabus harus ssuai dengan soal, soal dengan silabus <br> harus sesuai. Kemudian soal juga harus relevan dengan yang ada di silabus <br> dan di materi. |
| :--- | :--- |
| Researcher | : Yang terakhir ustadz, apakah mnurut ustad soal yang ustadz berikan untuk <br> adik-adik sudah mampu mengukur kemampuan mereka selama pross belajar <br> mereka? |
| Teacher | : Oh ya bisa sekali. maka dalam tes terakhir itu (soal semester) kita sudah <br> bisa tentukan nilainya siapa yang dapat sekian penambahan ulangan harian, <br> tugas ada juga kan kalo bahasa inggris ada dua macam itu penilaian, ada <br> penilaian kognitif dan penilaian psikomotor atau praktek sudah kita lakukan |
| semua itu. Jadi penilaian keterampilan khusus, nilai kognotif khusus. |  |

## B. The Teacher of Second Year SMAN 3 Palopo

Researcher
Researcher
$\begin{array}{ll}\text { Teacher } & \begin{array}{l}\text { : Pengembangan silabus di SMAN } 3 \text { Palopo sudah berjalan dengan sangat } \\ \text { baik dan yang membuat silabus itu adalah guru mata pelajaran yang terdiri } \\ \text { atas tim di bidang studi. }\end{array} \\ \text { Researcher } & \begin{array}{l}\text { : Kemudian selanjutnya mengenai kegunaan sebuah tes. Menurut sir seberapa } \\ \text { penting tes dalam proses belajar mengajar? }\end{array} \\ \text { Teacher } \quad \begin{array}{l}\text { : Tes sangat penting dilakukan untuk mengukur kemampuan siswa dan } \\ \text { mengukur sejauh mana pencapaian kompetensi dasar siswa. }\end{array} \\ \text { Researcher } \quad \begin{array}{l}\text { : Kemudian boleh tau sir, siapa yang merancang atau menyusun soal ulangan }\end{array}\end{array}$
$\begin{array}{ll}\text { Teacher } & \begin{array}{l}\text { : Pengembangan silabus di SMAN } 3 \text { Palopo sudah berjalan dengan sangat } \\ \text { baik dan yang membuat silabus itu adalah guru mata pelajaran yang terdiri } \\ \text { atas tim di bidang studi. }\end{array} \\ \text { Researcher } & \begin{array}{l}\text { : Kemudian selanjutnya mengenai kegunaan sebuah tes. Menurut sir seberapa } \\ \text { penting tes dalam proses belajar mengajar? }\end{array} \\ \text { Teacher } \quad \begin{array}{l}\text { : Tes sangat penting dilakukan untuk mengukur kemampuan siswa dan } \\ \text { mengukur sejauh mana pencapaian kompetensi dasar siswa. }\end{array} \\ \text { Researcher } \quad \begin{array}{l}\text { : Kemudian boleh tau sir, siapa yang merancang atau menyusun soal ulangan }\end{array}\end{array}$
$\begin{array}{ll}\text { Teacher } & \begin{array}{l}\text { : Pengembangan silabus di SMAN } 3 \text { Palopo sudah berjalan dengan sangat } \\ \text { baik dan yang membuat silabus itu adalah guru mata pelajaran yang terdiri } \\ \text { atas tim di bidang studi. }\end{array} \\ \text { Researcher } & \begin{array}{l}\text { : Kemudian selanjutnya mengenai kegunaan sebuah tes. Menurut sir seberapa } \\ \text { penting tes dalam proses belajar mengajar? }\end{array} \\ \text { Teacher } \quad \begin{array}{l}\text { : Tes sangat penting dilakukan untuk mengukur kemampuan siswa dan } \\ \text { mengukur sejauh mana pencapaian kompetensi dasar siswa. }\end{array} \\ \text { Researcher } \quad \begin{array}{l}\text { : Kemudian boleh tau sir, siapa yang merancang atau menyusun soal ulangan }\end{array}\end{array}$
$\begin{array}{ll}\text { Teacher } & \begin{array}{l}\text { : Pengembangan silabus di SMAN } 3 \text { Palopo sudah berjalan dengan sangat } \\ \text { baik dan yang membuat silabus itu adalah guru mata pelajaran yang terdiri } \\ \text { atas tim di bidang studi. }\end{array} \\ \text { Researcher } & \begin{array}{l}\text { : Kemudian selanjutnya mengenai kegunaan sebuah tes. Menurut sir seberapa } \\ \text { penting tes dalam proses belajar mengajar? }\end{array} \\ \text { Teacher } \quad \begin{array}{l}\text { : Tes sangat penting dilakukan untuk mengukur kemampuan siswa dan } \\ \text { mengukur sejauh mana pencapaian kompetensi dasar siswa. }\end{array} \\ \text { Researcher } \quad \begin{array}{l}\text { : Kemudian boleh tau sir, siapa yang merancang atau menyusun soal ulangan }\end{array}\end{array}$
$\begin{array}{ll}\text { Teacher } & \begin{array}{l}\text { : Pengembangan silabus di SMAN } 3 \text { Palopo sudah berjalan dengan sangat } \\ \text { baik dan yang membuat silabus itu adalah guru mata pelajaran yang terdiri } \\ \text { atas tim di bidang studi. }\end{array} \\ \text { Researcher } & \begin{array}{l}\text { : Kemudian selanjutnya mengenai kegunaan sebuah tes. Menurut sir seberapa } \\ \text { penting tes dalam proses belajar mengajar? }\end{array} \\ \text { Teacher } \quad \begin{array}{l}\text { : Tes sangat penting dilakukan untuk mengukur kemampuan siswa dan } \\ \text { mengukur sejauh mana pencapaian kompetensi dasar siswa. }\end{array} \\ \text { Researcher } \quad \begin{array}{l}\text { : Kemudian boleh tau sir, siapa yang merancang atau menyusun soal ulangan }\end{array}\end{array}$
$\begin{array}{ll}\text { Teacher } & \begin{array}{l}\text { : Pengembangan silabus di SMAN } 3 \text { Palopo sudah berjalan dengan sangat } \\ \text { baik dan yang membuat silabus itu adalah guru mata pelajaran yang terdiri } \\ \text { atas tim di bidang studi. }\end{array} \\ \text { Researcher } & \begin{array}{l}\text { : Kemudian selanjutnya mengenai kegunaan sebuah tes. Menurut sir seberapa } \\ \text { penting tes dalam proses belajar mengajar? }\end{array} \\ \text { Teacher } \quad \begin{array}{l}\text { : Tes sangat penting dilakukan untuk mengukur kemampuan siswa dan } \\ \text { mengukur sejauh mana pencapaian kompetensi dasar siswa. }\end{array} \\ \text { Researcher } \quad \begin{array}{l}\text { : Kemudian boleh tau sir, siapa yang merancang atau menyusun soal ulangan }\end{array}\end{array}$
$\begin{array}{ll}\text { Teacher } & \begin{array}{l}\text { : Pengembangan silabus di SMAN } 3 \text { Palopo sudah berjalan dengan sangat } \\ \text { baik dan yang membuat silabus itu adalah guru mata pelajaran yang terdiri } \\ \text { atas tim di bidang studi. }\end{array} \\ \text { Researcher } & \begin{array}{l}\text { : Kemudian selanjutnya mengenai kegunaan sebuah tes. Menurut sir seberapa } \\ \text { penting tes dalam proses belajar mengajar? }\end{array} \\ \text { Teacher } \quad \begin{array}{l}\text { : Tes sangat penting dilakukan untuk mengukur kemampuan siswa dan } \\ \text { mengukur sejauh mana pencapaian kompetensi dasar siswa. }\end{array} \\ \text { Researcher } \quad \begin{array}{l}\text { : Kemudian boleh tau sir, siapa yang merancang atau menyusun soal ulangan }\end{array}\end{array}$
$\begin{array}{ll}\text { Teacher } & \begin{array}{l}\text { : Pengembangan silabus di SMAN } 3 \text { Palopo sudah berjalan dengan sangat } \\ \text { baik dan yang membuat silabus itu adalah guru mata pelajaran yang terdiri } \\ \text { atas tim di bidang studi. }\end{array} \\ \text { Researcher } & \begin{array}{l}\text { : Kemudian selanjutnya mengenai kegunaan sebuah tes. Menurut sir seberapa } \\ \text { penting tes dalam proses belajar mengajar? }\end{array} \\ \text { Teacher } \quad \begin{array}{l}\text { : Tes sangat penting dilakukan untuk mengukur kemampuan siswa dan } \\ \text { mengukur sejauh mana pencapaian kompetensi dasar siswa. }\end{array} \\ \text { Researcher } \quad \begin{array}{l}\text { : Kemudian boleh tau sir, siapa yang merancang atau menyusun soal ulangan }\end{array}\end{array}$ itu sendiri?

Teacher : Soal UAS dibuat oleh tim dan bisa juga dibuat oleh individu guru itu sendiri tergantung dari kesepakatan para guru bidang studi bahasa Inggris.

Researcher : Apa kesulitan-kesulitan yang sir hadapi saat menyusun soal-soal untuk adik-adik di SMA?

Teacher : Pada dasarnya tidak ada kesulitan dalam membuat soal pada pelaksanaan UAS maupun tes-tes lain, semisal ulangan harian karena semua soal yang diujikan tentunya telah dipahami dan sesuai dengan kompetensi dasar yang diajarkan. Researcher : Apakah setiap ulangan itu sendiri sir bersama guru-guru yang lain menbuat kisi-kisi sebelum mendesain soal?
Teacher : Kisi-kisi soal merupakan sebuah subitem dari perangkat pembelajaran sehingga saya tidak mungkin sebelum menyusun soal maka sebagai guru yang baik berkewajiban membuat kisi-kisi soal.

Researcher : Baik selanjutnya sir, apakah validitas dari sebuah tes itu penting dalam pembuatan soal?
Teacher : Validating itu merupakan sesuatu yang sangat penting untuk mengukur apakah soal itu sudah cocok untuk jenis kelas dan kemampuan siswa sesuai dengan kompetensi dasar yang telah diajarkan.
Researcher : Lalu menurut sir sendiri seberapa penting kesesuaian soal terhadap silabus?
Teacher
: Sebelumnya sir perkenalkan saya Nurul Ainun Islamia. Terima kasih atas kesempatannya sir, telah mengizinkan saya untuk mengajukan beberapa pertanyaan mengenai UAS yang dilaksanakan beberapa minggu yang lalu. Tapi sebelumnya sir, saya mau tahu sudah berapa lama sir menjadi guru di SMAN 3 Palopo?
Teacher : Saya telah mengajar di SMA 3 Palopo selama 4 tahun.
Researcher
: Lalu untuk pengembangan silabus itu sendiri sir, apakah silabus itu dirancang oleh guru atau guru mengambil silabus dari beberapa sumber seperti internet atau semacamnya? -adik
: Sangat penting untuk menyesuaikan soal yang dibuat dengan silabus yang kita miliki. Sehingga tidak terjadi distorsi dalam penilaian individu siswa.

| Researcher | : Yang terakhir sir, apakah menurut sir soal yang sir berikan untuk adik-adik <br> sudah mampu mengukur kemampuan mereka selama pross belajar mereka? |
| :--- | :--- |
| Teacher | : Soal yang saya desain dan saya susun tentunya sudah sangat mampu <br> mengukur kemampuan siswa karena dari soal itu tergambar jelas bagaimana <br> seorang siswa menguasai materi yang telah diajarkan. |
| Researcher | : Oh iya terimakasih banyak sir atas waktu dan kesempatannya. |
| Teacher | : Sama-sama. |

## APPENDIX 8

A. The teacher the first year of SMAN 3 Palopo.

B. The teacher of the second year of SMAN 3 Palopo.


## APPENDIX 9

Table 22: $\mathbf{r}$ for $\mathbf{d f}=\mathbf{1} \mathbf{- 3 5}$ Table $^{67}$

| (N-2) |  |  | Tingkat significouldces untuk uji satu arah |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.05 | 0.025 |  |  | 0.005 | 0.0005 |
| Tingkat signifikansi untuk uji dua arah |  |  |  |  |  |
| 0.1 | 0.05 |  |  | 0.01 | 0.001 |
| 1 | 0.9877 | 0.9969 | 0.9995 | 0.9999 | 1.0000 |
| 2 | 0.9000 | 0.9500 | 0.9800 | 0.9900 | 0.9990 |
| 3 | 0.8054 | 0.8783 | 0.9343 | 0.9587 | 0.9911 |
| 4 | 0.7293 | 0.8114 | 0.8822 | 0.9172 | 0.9741 |
| 5 | 0.6694 | 0.7545 | 0.8329 | 0.8745 | 0.9509 |
| 6 | 0.6215 | 0.7067 | 0.7887 | 0.8343 | 0.9249 |
| 7 | 0.5822 | 0.6664 | 0.7498 | 0.7977 | 0.8983 |
| 8 | 0.5494 | 0.6319 | 0.7155 | 0.7646 | 0.8721 |
| 9 | 0.5214 | 0.6021 | 0.6851 | 0.7348 | 0.8470 |
| 10 | 0.4973 | 0.5760 | 0.6581 | 0.7079 | 0.8233 |
| 11 | 0.4762 | 0.5529 | 0.6339 | 0.6835 | 0.8010 |
| 12 | 0.4575 | 0.5324 | 0.6120 | 0.6614 | 0.7800 |
| 13 | 0.4409 | 0.5140 | 0.5923 | 0.6411 | 0.7604 |
| 14 | 0.4259 | 0.4973 | 0.5742 | 0.6226 | 0.7419 |
| 15 | 0.4124 | 0.4821 | 0.5577 | 0.6055 | 0.7247 |
| 16 | 0.4000 | 0.4683 | 0.5425 | 0.5897 | 0.7084 |
| 17 | 0.3887 | 0.4555 | 0.5285 | 0.5751 | 0.6932 |
| 18 | 0.3783 | 0.4438 | 0.5155 | 0.5614 | 0.6788 |
| 19 | 0.3687 | 0.4329 | 0.5034 | 0.5487 | 0.6652 |
| 20 | 0.3598 | 0.4227 | 0.4921 | 0.5368 | 0.6524 |
| 21 | 0.3515 | 0.4132 | 0.4815 | 0.5256 | 0.6402 |
| 22 | 0.3438 | 0.4044 | 0.4716 | 0.5151 | 0.6287 |
| 23 | 0.3365 | 0.3961 | 0.4622 | 0.5052 | 0.6178 |
| 24 | 0.3297 | 0.3882 | 0.4534 | 0.4958 | 0.6074 |
| 25 | 0.3233 | 0.3809 | 0.4451 | 0.4869 | 0.5974 |
| 26 | 0.3172 | 0.3739 | 0.4372 | 0.4785 | 0.5880 |
| 27 | 0.3115 | 0.3673 | 0.4297 | 0.4705 | 0.5790 |
| 28 | 0.3061 | 0.3610 | 0.4226 | 0.4629 | 0.5703 |
| 29 | 0.3009 | 0.3550 | 0.4158 | 0.4556 | 0.5620 |
| 30 | 0.2960 | 0.3494 | 0.4093 | 0.4487 | 0.5541 |
| 31 | 0.2913 | 0.3440 | 0.4032 | 0.4421 | 0.5465 |
| 32 | 0.2869 | 0.3388 | 0.3972 | 0.4357 | 0.5392 |
| 33 | 0.2826 | 0.3338 | 0.3916 | 0.4296 | 0.5322 |

${ }^{67}$ Product by: Junaidi (http://junaidichaniago.wordpress.com), 2010, p 1

## APPENDIX 10



PEMERINTAH PROVINSI SULAWESI SELATAN DINAS PENDIDIKAN
UPT SMA NEGERI 3 PALOPO
Alamat : Jln. Andi Djemma No. 52 Telp./Fax (0471) 21306 E-Mail : smanet_palopo@yahoo.com Palopo 91911

## SURAT KETERANGAN PENELITIAN

## Nomor : 070/075-UPT SMA.03/PLP/DISDIK

Yang bertanda tangan dibawah ini :

| Nama | : HAIRUDDIN, S.Pd., M.Pd. |
| :--- | :--- |
| Jabatan | : Kepala UPT SMA Negeri 3 Palopo |

Menyatakan dengan benar bahwa :

| Nama | : NURUL AINUN ISLAMIA |
| :--- | :--- |
| NIM | $: 14.16 .30167$ |
| Tempat Tgl Lahir | : Makassar, 18 Desember 1996 |
| Jenis Kelamin | : Perempuan |
| Prodi | : Pendidikan Bahasa Inggris |
| Pekerjaan | : Mahasiswi(a) |
| Alamat | : Lamasi |
| Perguruan Tinggi | : Institut Agama Islam Negeri (IAIN) Palopo |

Telah mengadakan Penelitian tanggal 18 Mei s.d. 25 Mei 2018, dalam rangka penyusunan
Skripsi yang berjudul :
"THE STANDARDIZATION OF OBJECTIVE TEACHERS MADE ENGLISH TEST AT SMAN 3 PALOPO".
Demikian surat keterangan ini dibuat untuk dipergunakan sebagaimana mestinya.


## APPENDIX 11





PEMERINTAH KOTA PALOPO
DINAS PENANAMAN MODAL DAN PELAYANAN TERPADU SATU PINTU
Alarnat, II K.H.M Hasyim No. 5 Kota Palopo - Sulawear Êplatan Taipon (047.1) 23602

## ASLI

## IZIN PENELITIAN

NOMOR : 724/P/DPMPTSPN/2018

## DASAR HUKUM :

1. Undahig-Undeng Nomor 18 Tahun 2002 tentang Sistern Nasional Peneitian, Pengombangan dan Penerapan IPTEK;
2. Peraturen Mendagn Nomor 64 Tahun 2011 fentang Pedoman Penerbitan Rekomendasi Penelitian, sebagaimana telah dlubah dengan Paraturan Mendagri Nomor 7 Tahun 2014,
3. Peraturan Wailkota Palopo Nomor 23 Tahun 2016 tentang Penyederhahaan Perizinan dan Non Perlainan di Kota Palopo,

4 Peraturen Walikota Palopo Nomor 22 Tahun 2016 tentang Pendelegasian Wewenang Penyelenggaraan Perizinan dan Non Perzinan Kepada Dinas Fenanaman Modal dan Pelayanan Terpadu Satu Pintu Kota Palopo.

## MEMBERIKAN IZIN KEPADA

## Nama

NURUL AINUN ISLAMIA
Jenis Kelamin
Alamat
Perempuan
Pekerjaan
Dsn. Sentralkab. Luwu
N|M
Mahasiswa
14.16.3.0167

Maksud dan Tujuan mengadakan peneiltain dalam rangka penulisan Skripsi dengan Judul
THE STANDARDIZATION OF OBJEGTIVE TEACHERS MADE ENGLISH TEST AT SMAN 3 PALOPO
Lokasi Penelitian

SMA NEGERI 3 PALOPO
Lamanya Penelitian
18 Mel 2018 S.d. 16 Juht 2018

## DENGAN KETENTUAN SEBAGAI BERIKUT:

1. Sebelum dan sesudah melaksanakan kegiatan penelitian kiranya mietapor pada Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu Kota Palopo.
2. Menaati semua peraturan perundang-undangan yang berlaku, serla menghormati Adat Istiadat setempat.
3. Peneiltan tidak menyimpang dari maksudizin yang diberikan.
4. Menyerahkan 1 (satu) examplar foto copy hasil penelitian kepada Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu Kota Palopo.
5. Surat lzin Penelitan ini dinyatakan tidak beriaku, bilamane pemegang izin temyata tidak menaati ketentuanketentuan tersebut di atas.
Demikian Surat Izin Penelitian ini diterbikan untuk dipergunakan sebagaimana mestinya

$$
\begin{aligned}
& \text { Diterbitkan di Kota Palopo } \\
& \text { Pada tanggal: } 16 \text { Mei } 2018 \\
& \text { P Kepala Dinas Pénanaman Modal dan PTSP } \\
& \text { EAFID KASIM SS, SH, M.Si } \\
& \text { Pangkat : Pembina Tk I } \\
& \text { NIP: 19830309 } 200312.1004
\end{aligned}
$$

## Tembusan:

Kopata Batankestang Prov 5il-Sel
Whikotr Palopo

1. Donamin 14035 m

4 Kapolks Palopo




[^0]:    ${ }^{1}$ Tentang Standar Nasional Pendidikan Peraturan Pemerintah Republik Indonesia, Nomor 19 Tahun 2005 Pasal 28, Ayat 3, pdf, p. 9.
    ${ }^{2}$ Areta Wulan Dari, An Analysis On The Content Validity Of English Summative Test Items At The Even Semester Of The Second Grade Of Junior High School, Thesis. Jakarta, For The Degree Of S. Pd. (Bachelor Of Art) In English Language Education: Syarif Hidayatullah State Islamic University, Jakarta, 2014, p.1.

[^1]:    ${ }^{3}$ Gito Supriadi, Kemampuan Guru Dalam Mengevaluasi Hasil Belajar Pendidikan Agama Islam Di Madrasahtsanawiyah Se-Kota Palangka Raya, Jurnal Studi Agama Dan Masyarakat, Vol.4, Number 1, 2007, p. 112.
    ${ }^{4}$ Christine Coombe, Peter Davidson, et al (ed.), The Cambridge Guide to Second Language Assessment, (New York: Cambridge University Press, 2012), p. 37-43.

[^2]:    ${ }^{5}$ William Wiersma and Stephent G Juts, Educational Measurement and Testing, (Boston: Allyn and Bacon, 1990), p. 183.

[^3]:    ${ }^{6}$ H Douglas Brown, Language Assessment Principles and Classroom Practice, (California: Longman Group, 2003), p. 19.
    ${ }^{7}$ Zainal Arifin., Evaluasi Pembelajaran, (Bandung: Remaja Rosdakarya, 2011), p. 68.
    ${ }^{8}$ Areta Wulan Dari, An Analysis On The Content Validity Of English Summative Test Items At The Even Semester Of The Second Grade Of Junior High School, Thesis. Jakarta, For The Degree Of S. Pd. (Bachelor Of Art) In English Language Education: Syarif Hidayatullah State Islamic University, Jakarta, 2014, p. 4

[^4]:    ${ }^{9}$ Endah Putri Novi Arti, Kemampuan Guru Mata Pelajaran Biologi Dalam Pembuatan Soal Hot (Higher Order Thinking) Di SMA Negeri 1 Wonosari Klaten. Naskah Publikasi. Surakarta, Program Sarjana (S1): Universitas Muhammadiyah Surakarta, 2015, p. 8

[^5]:    ${ }^{10}$ Endang Asriyanti Amin Sikki Et Al, The Competence Of Primary School English Teachers In Indonesia, Journal Of Education And Practice Vol. 4, No.11. Makassar, State University of Makassar, 2013. p. 144
    ${ }^{11}$ Areta Wulan Dari, An Analysis On The Content Validity Of English Summative Test Items At The Even Semester Of The Second Grade Of Junior High School, Thesis. Jakarta, For The Degree Of S. Pd. (Bachelor Of Art) In English Language Education: Syarif Hidayatullah State Islamic University, Jakarta, 2014, p. 49
    ${ }^{12}$ Arif Purnomo, Kemampuan Guru Dalam Merancang Tes Berbentuk Pilihan Ganda Pada Mata Pelajaran IPS Untuk Ujian Akhir Sekolah (Uas). Lembar Ilmu Kependidikan Jilid 36, No 1. Semarang, Universitas Negeri Semarang, 2007, p. 5

[^6]:    ${ }^{13}$ Djemari Madrapi, Desain dan Penilaian Pembelajaran Mahasiswa, Journal, Vol. 16 Universitas Gajah Mada, Yogyakarta, 2003, online: https://www.google.co.id/amp/s/yogapermanawijaya.wordpress.com/2014/10/16pengertian-pengukuran-measurement-penilaian-assessment-dan-evaluasi-evaluate-dalam-pendidikan/amp, accessed on 30th Januari 2018
    ${ }^{14}$ Terry Overton, Assssing Learners with Special Needs: An Applied Approach (7th Edition), Pearson Education, Inc, University of Texas- Brownsville, 2008. p. 3

[^7]:    ${ }^{15}$ Bob Kizlik, Measurement, Assesment, and Evaluation in Education. Online: http://www.adprima.com/measurement.htm, accessed on 30th Januari 2018
    ${ }^{16}$ Brown \& Abeywickrama, Language Assessment: Principles and Classroom Practice, Pearson Education, Inc, United Stated of America, 2010, p. 4

[^8]:    ${ }^{17}$ Glen Fulcher and Fred Davidson. Language Testing and Assessment. 2007
    ${ }^{18}$ Tim Penyusun Pusat Bahasa Departemen Pendidikan Nasional. Kamus Besar Bahasa Indonesia Edisi Kelima. Jakarta: Balai Pustaka. 2005
    ${ }^{19}$ Sumarna Surapranata, Panduan Penulisan Tes Tertulis, (Bandung : Remaja Rosda Karya, 2007), p. 19
    ${ }^{20}$ Anas Sudijono, Pengantar Evaluasi Pendidikan, Pt. Raja Grafindo Persada, Jakarta, 1996, p. 66

[^9]:    ${ }^{21}$ Peter W. Airasian and Michael K. Russell, Classroom Assessment, (New York: McGraw-Hill Companies, Inc, 2008), p. 145.
    ${ }^{22}$ Anas Sudijono, Pengantar Evaluasi Pendidikan, Pt. Raja Grafindo Persada, Jakarta, 1996, p. 67.

[^10]:    ${ }^{23}$ Ngalim Purwanto,M.P, Prinsip-Prinsip Dan Tehnik Evaluasi Pengajaran, Bandung : Pt. Remaja Rosdakarya, 2004, p.7.

[^11]:    ${ }^{24}$ Suharsimi Arikunto, Dasar-Dasar Evalusai Pendidikan. (Jakarta:Pt. Bumi Aksara, 2nd Edition, 2016), p. 177.
    ${ }^{25}$ Nana Sudjana, Penilaian Hasil Proses Belajar, Bandung : Pt Remaja Rosda Karya, 1989, p. 48.

[^12]:    ${ }^{26}$ Suharsimi Arikunto, Dasar-Dasar Evalusai Pendidikan. (Jakarta:Pt. Bumi Aksara, 2nd Edition, 2016), p. 72
    ${ }^{27}$ Mudjijo, Tes Hasil Belajar, (Jakarta : Bumi Aksara, 1995), p.
    ${ }^{28}$ David P. Harris, Testing English as a second Language, (New York: McGraw-Hill Book Company), p. 13.
    ${ }^{29}$ Thu H. Tran, Second Language Assessment For Classroom Teachers, Midtesol Paper, Missouri University Of Science And Technology, Rolla, Missouri, Usa, 2012, p.7.
    ${ }^{30}$ Christine Coombe, Peter Davidson, Et Al (Ed.), The Cambridge Guide To Second Language Assessment, New York: Cambridge University Press, 2012, p. 37-43.

[^13]:    ${ }^{31}$ Steven J. Burton Et Al, How To Prepare Better Multiple-Choice Test Items: Guidelines For University Faculty, Brigham Young University Testing Services And The Department Of Instructional Science, 1991, p. 4
    ${ }^{32}$ H. Douglas Brown, Language Assessment Principles And Classroom Practices, San Francisco, California, 2003, p. 22

[^14]:    ${ }^{33}$ Norman E. Gronlund, Measurement and Evaluation in Teaching, (New York: Macmillan Publishing Co., Inc, 1981), p. 66-67.
    ${ }^{34}$ Suharsimi Arikunto, Dasar-Dasar Evalusai Pendidikan. (Jakarta:Pt. Bumi Aksara, 2nd Edition, 2016), p. 80.
    ${ }^{35}$ William Wiersma and Stephen G. Jurs, Educational Measurement and Testing, Boston: Allyn and Bacon, Inc, 1990, p. 19.
    ${ }^{36}$ Norman E. Gronlund and Robert L. Linn,, Measurement and Evaluation in Teaching, (New York: Collier Mac-Millan Publishers, 1990), 6th edition, p. 72.

[^15]:    ${ }^{37}$ Shaumi Fitriyanti, Analyzing The Content Validity Of English Summative Tests In Vocational Schools. Thesis, Jakarta, Program Sarjana (S1): Faculty Of Tarbiyah And Teachers Training Syarif Hidayatullah State Islamic University, 2014, p. 18.
    ${ }^{38}$ J. Charles Alderson, Caroline Clapham, and Diane Wall, Language Test Construction and Evaluation, New York: Cambridge University Press, 1995, p. 172.
    ${ }^{39}$ J. B Heaton, Writing English Language Tests, New York: Longman Group UK Limited, New Edition, 1988, p. 159.
    ${ }^{40}$ Shaumi Fitriyanti, Analyzing The Content Validity Of English Summative Tests In Vocational Schools. Thesis, Jakarta, Program Sarjana (S1): Faculty Of Tarbiyah And Teachers Training Syarif Hidayatullah State Islamic University, 2014, p. 18.
    ${ }^{41}$ Charles D. Hopkins and Richard L. Antes, Classroom Measurement and Evaluation, (Illinois: F.E. Peacock Publishers, Inc, 1990), 3rd Edition, p. 331
    ${ }^{42}$ J.B Heaton, Writing English Language Test, London: Longman Group, New Edition,

[^16]:    ${ }^{43}$ Khodirin, "Content Validity of the English Summative Test in the First Year of SMK Lingga Kencana Depok", Thesis of UIN Syarif Hidayatullah, (Jakarta: UIN Syarif Hidayatullah Jakarta, 2013), p. 39, unpublished.
    ${ }^{44}$ Khaerudin, Kualitas Instrumen Tes Hasil Belajar, Madaniyah Journal, Vol. 2 Edisi IX, Agustus 2015, p. 219. For further explanation see Anas Sudijono, Pengantar Statistik Pendidikan, (Jakarta: Rajawali, 1991), p. 185
    ${ }^{45}$ Khaerudin, Kualitas Instrumen Tes Hasil Belajar, Madaniyah Journal, Vol. 2 Edisi IX, Agustus 2015, p. 219. For further explanation see Anas Sudijono, Pengantar Statistik Pendidikan, (Jakarta: Rajawali, 1991), p. 218

[^17]:    ${ }^{46}$ Norman E. Gronlund, Measurement and Evaluation in Teaching, (New York: Macmillan Publishing Co., Inc, 1981), p. 65-66
    ${ }^{47}$ Desmond Allison, Language Testing And Evaluation (An Introductory Course), Kent Ridge Crescent: Singapore University Press, 1999, p. 85

[^18]:    ${ }^{48}$ Shaumi Fitriyanti, Analyzing The Content Validity Of English Summative Tests In Vocational Schools. Thesis, Jakarta, Program Sarjana (S1): Faculty Of Tarbiyah And Teachers Training Syarif Hidayatullah State Islamic University, 2014, p. 15
    ${ }^{49}$ Khaerudin, Kualitas Instrumen Tes Hasil Belajar, Madaniyah Journal, Vol. 2 Edisi IX, Agustus 2015, p. 224.

[^19]:    ${ }^{50}$ Brown \& Abeywickrama, Language Assessment: Principles and Classroom Practice, Pearson Education, Inc, United Stated of America, 2010.

[^20]:    ${ }^{51}$ Shaumi Fitriyanti, Analyzing The Content Validity Of English Summative Tests In Vocational Schools. Thesis, Jakarta, Program Sarjana (S1): Faculty Of Tarbiyah And Teachers Training Syarif Hidayatullah State Islamic University, 2014, p. 16
    ${ }^{52}$ Suharsimi Arikunto, Dasar-Dasar Evalusai Pendidikan. (Jakarta:Pt. Bumi Aksara, 2nd Edition, 2016), p. 222

[^21]:    ${ }^{53}$ Suharsimi Arikunto, Dasar-Dasar Evalusai Pendidikan. (Jakarta:Pt. Bumi Aksara, 2nd Edition, 2016), p. 226

[^22]:    ${ }^{54}$ Sitiatava Rizema Putra, Desain Evaluasi Belajar Berbasis Kinerja, (Jogjakarta: Diva Press, 1st Edition, 2013), p. 199.
    ${ }^{55}$ Sitiatava Rizema Putra, op.cit, p. 197.

[^23]:    ${ }^{56}$ Areta Wulan Dari, An Analysis On The Content Validity Of English Summative Test Items At The Even Semester Of The Second Grade Of Junior High School, Thesis. Jakarta, For The Degree Of S. Pd. (Bachelor Of Art) In English Language Education: Syarif Hidayatullah State Islamic University, Jakarta, 2014, p. 14.

[^24]:    ${ }^{57}$ Sitiatava Rizema Putra, Desain Evaluasi Belajar Berbasis Kinerja, (Jogjakarta: Diva Press, 1st Edition, 2013), p. 198.

[^25]:    59 Guilford J.P, Fundamental Statistics in Psychology and Education, (New York : McGraw-Hill Book, 1956), p. 145

[^26]:    ${ }^{60}$ Suwarto, Tingkat Kesulitan, Daya Beda, dan Reliabilitas Tes Menurut Teori Tes Klasik, Program Studi Pendidikan Biologi -FKIP Universitas Veteran Bangun Nusantara Sukoharjo, (Jurnal Pendidikan, Jilid 16, Nomor 2, 2007), p. 168

[^27]:    ${ }^{61}$ Arif Purnomo, p. 7
    ${ }^{62}$ Wiersma and Jurs, Educational Measurment And Testing, (Massachusetts: Allyn and Bacon, 1990), p. 288

    63 Nana Sudjana, Penilaian Hasil Proses Belajar Mengajar, (Bandung: Remaja Rosdakarya, 2004), p. 136

[^28]:    ${ }^{64}$ Endah Putri Noviarti, p. 8

[^29]:    ${ }^{65}$ Madsen, Techniques in Testing, (New York: Oxford University Press, 1983), p. 4

