## APPENDICES

## Appendix 1 Reading proficiency Test (After and Before Validation)

## READING TEST AFTER VALIDATION

Instruction : please read the text and questions carefully. To answer, you need to cross the option in the answer sheet.Before answering, don't forget to fill in the identity in the right top of the answer sheet.

## The text entitled My Best Friend is for question number 1-5

## My Best Friend

I have the best friend named Ida. I grow with her together because she is my neighbour. We enter the same school together starting from kindergarten, primary school and junior high school. Ida is older 2 months than me. She was born on 12 of June 2006. She always calls me in the morning before going to school. Then, we go to school together on foot.

Ida has nice physical appearence. She is taller than me, but she is a little bit fat. She is 40 kg . Her skin is white and clean. She has long straight hair. She tights her hair when she goes to school. The teeth are neat and sparkling white. He looks very charming when smiling. Ida is like her mother physically.

Ida is an easy going girl. She does frienship with whoever and she does not see from their economic or social status. Ida is is very kind and friendly to everyone so she has many friends. She has a fantastic sense of humor and she always makes people laugh with joke. He can't see her friend sad. However, she is hate with lateness. If her friend is late, she usually gets angry. For her, lateness is untolerable.

1. What is the text about?
a. Description of Ida
b. Description of the writer
c. Story of Ida
d. Story of the writer
2. "She was born on $12 \ldots$ ?" (1st paragraph, 5th sentence). What does the underline word mean?
a. Ida
b. The writer
c. Ida's mother
d. The writer's mother
3. How does Ida's mother look like?
a. Dark skin, short straight hair, a little bit fat
b. White skin, short curly hair, a little bit fat
c. Dark skin, long straight hair, a little bit fat
d. White skin, long straight hair, a little bit fat
4. When was Ida Born?
a. 12 of June 2006
b. 12 of July 2006
c. 12 of August 2006
d. 12 of September 2006
5. "... she is hate with lateness". The underlined word has closest in meaning to....
a. Love
b. Like
c. Dislike
d. Interest

## The text entitled Beratan Lake is for question number 6-10

## Beratan Lake

Bali has many toursim destinasions, one of them is Beratan Lake. It is located in Candikuning Village, Tabanan, Bali. Beratan Lake can be reached easily because it is on the way to Denpasar from Singaraja. People can reach it by using motor bike and car. The entering ticket is also cheap, it is only Rp. 15.000 for local visitor.

The main attraction of this place is the lake. The lake is still natural with mountain panomara in the east part. In the west part, there are two temples, Ulun Danu Beratan dan Dalem temple. The main part of Ulun Danu temple is located in the lake. It looks like floating on the lake. However, we can not enter the temple. We just can see it from the outside.

In the south part is recreational part. Here, we can rent floating duct, speedboat, and fishing. You have to pay more if you want to use the facilities. The floating duck is more expensive than speed boat because it can only be occupied by two persons. The ticket for the floating duct is Rp.100.000 for one hour. You can also rent fishing equipments if the don't bring them. After enjoying them, you
can visit culinary stand in the west part. There are many kinds of food sold, such as : bakso (meat ball), goat satay, rabbit satay, fried chicken, etc.
6. What is the main idea of the first paragraph?
a. General description of Beratan Lake
b. Beratan Lake is located in Tabanan Regency
c. The price of entering ticket to Beratan Lake
d. Easy accessto reach Beratan Lake
7. "It looks like floating...." (2nd paragraph 5th sentence). The underlined word refers to....
a. Beratan Lake
b. Ulun Danu Temple
c. The main part of Ulun Danu temple
d. Dalem temple
8. How much should five people pay to enter Beratan Lake?
a. Rp. 15.000
b. Rp. 30.000
c. Rp. 60.000
d. Rp. 75.000
9. What can you enjoy in the south part of Beratan Lake?
a. Beautiful panorama
b. Ulun Danu temple
c. Recreational site
d. Dalem temple
10. "...have to pay more if..." (3rd paragraph, 3rd sentence). The opposite meaning of the underlined word is....
a. Sell
b. Borrow
c. Buy
d. Give

## The text entitled Travelling to Lembongan Island is for question number 1115

## Travelling to Lembongan Island

To enjoy long school vocation last month, my family and I visited Lembongan Island. It is actually part of Bali Province, but the location is accross the sea. We went there in the morning. At 8 AM, we arrived in Sanur harbour. There, my father directly bought ticket for 5 persons. The price is just Rp. 65.000 per person for adult (my father and mother) and Rp. 50.000 for me and older brothers. Before going to the speed boat, we enjoyed sunrise and balinese cakes near the ticket service. Finally, we boarded and went to Lembongan Island at 8.30 AM.

Finally, we arrived in Mushroom Harbour in Lembongan at 9 AM. We directly went to villa which had been booked by my grand father. My father booked for two rooms, one room was for parent and one room for me and my siblings. I put my clothes firtsly, then I and my siblings went to swimming pool. We were so happy because the swimming pool was large. Then, we ordered fried rice and juices. At 11.00 AM, we stopped swimming and prepared for the next destination. At 12.00 AM, we visited Mangrove Harbour to meet Captain Bobo. We were going to see mangrove jungle by boat. After seeing mangrove jungle, we moved to the sea for snorkling. The captain helped us to wear our safety equipments. Then, we did snorkling to see fish and coral reefs. It was so beautiful. We finished snorkling around 5.00 PM and we directly changed our clothes. My father invited us to eat grilled fish in the restaurant near it. We were so happy at that time.
11. The second paragraph tells us about....
a. The beauty of Lembongan Island
b. Trip to Mangrove jungle
c. Snorkling in Lembongan Island
d. The writer's activity in Lembongan Island
12. "It is actually part of Bali Province..." (1st paragraph, 2nd sentence). The underlined word refers to....
a. Lembongan Island
b. Long school vacation
c. Mushroom Harbour
d. Sanur Harbour
13. How much should my parent pay for them?
a. Rp. 65.000
b. Rp. 130.000
c. Rp. 50.000
d. Rp. 280.000
14. The writer and his family did many activities in Lembongan Island, except....
a. Grilling fish
b. Snorkling
c. Visiting mangrove jungle
d. Swimming in the pool
15. "....to see mangrove jungle by boat" (2nd paragraph, 9th sentence). The underlined word has the closest meaning to....
a. Sea
b. Harbour
c. Coral reef
d. Forest

The text entitled My Lucky Day is for question number 16-20

## My Lucky Day

Yesterday was a lucky day for me. In the morning, my mother cooked my favourite food, pizza. I really loved it because the toping was full of beef and vegetables. Then, I ate it fast because it was still warm. My mother was happy to see me eat the pizza. When I finished, my father invited me to pet farming. There, I helped my father to feed the chicken, duck, and goat. When I entered the duck cage, I saw many eggs. My father asked me to pick them up. I did and calculated the egg amount. I put them in the special place and cleaned them.

In the afternoon, my father and mother sold the eggs together with me to traditional market. My parent looked so happy when they recieved much money. My father asked " let's go to toys shop! You can freely buy toys you want". I was so surprised and happy to hear that. Then, I replied " really? I want to buy playstation". My parents agreed and we directly went to toy shop. Arriving in the toy shop, I directly chose playstation 3 . I also bought 1 cassette containing of moto GP and football game. The shopassitant told me how to operate the playstation.

Then, we went home. Arriving at home, I directly set up my playstation. It successfully worked so I could play directly. However, my father told me that there was time limit to play. I was only allowed to play after studying and it was not more than 2 hours a day. I agreed and I was so happy because finally I had my dream toy.
16. What is the purpose of the text?
a. To tell the writer' real experience
b. To tell how the writer get playstation
c. To entertaint the reader about the writer's story
d. To describe the writer's playstation
17. "My parent looked so happy...." (2nd paragraph 2nd sentence). The underlined word refers to.
a. The writer's mother
b. The writer's father
c. The writer's father and mother
d. The writer and shopassitant
18. Which statement is true based on the text?
a. The writer should not study before palying playstation
b. The writer can play playstation freely
c. There is a rule for the writer to play playstation
d. The writer disagree to the rule of playing plastation
19. Who told the writer the way to operate the playstation 3 ?
a. The writer's father
b. The shopassisstant
c. The writer's mother
d. The writer's parent
20. "...with me to traditional market". The underlined word has opposite meaning to....
a. Old
b. Classic
c. Modern
d. Ancient

## The conversation below is for question number 20-25

Mira : I hear that Bayu gets 100 for math test. Is that right?
Devi : No, he only gets 90 . He makes 1 mistake. How about you?
Gita : I gets 100 . I really study hard for it.
Mira : congratulation, you are great. I only get 85 . It is very difficult for me.
Devi : don't be worry! I also get 85 . It is difficult also for me.
Mira : Gita, can I borrow your math examination? I want to learn in which part I make mistake.

Gita : sure, I will give you in the class because I put it in my bag.
Mira : thank you, let's order food and drink now!
Gita : I only order drink.
21. What are the speakers talking about?
a. Math test score
b. Bayu
c. Math test difficulty
d. Food and drink
22. "It is very difficult for me". (Mira's utterance). The underlined word refers to....
a. Mira's math score
b. Math test
c. Math score
d. Mistake
23. Which statement is true based on the text?
a. The conversation is done in the library
b. Devi is cleverer than Bayu
c. Gita is the cleverest student in math
d. Gita order certain food
24. Where will Gita give her math test result?
a. In the classroom
b. In the library
c. In the canteen
d. In her house
25. "He makes 1 mistake". The underlined word has closest meaning to....
a. Wrong
b. True
c. Correct
d. Right

## READING TEST BEFORE VALIDATION*

Instruction : please read the text and questions carefully. To answer, you need to cross the option in the answer sheet.Before answering, don't forget to fill in the identity in the right top of the answer sheet.

## The text entitled My Best Friend is for question number 1-6

## My Best Friend

I have the best friend named Ida. I grow with her together because she is my neighbour. We enter the same school together starting from kindergarten, primary school and junior high school. Ida is older 2 months than me. She was born on 12 of June 2006. She always calls me in the morning before going to school. Then, we go to school together on foot.

Ida has nice physical appearence. She is taller than me, but she is a little bit fat. She is 40 kg . Her skin is white and clean. She has long straight hair. She tights her hair when she goes to school. The teeth are neat and sparkling white. He looks very charming when smiling. Ida is like her mother physically.

Ida is an easy going girl. She does frienship with whoever and she does not see from their economic or social status. Ida is is very kind and friendly to everyone so she has many friends. She has a fantastic sense of humor and she always makes people laugh with joke. He can't see her friend sad. However, she is hate with lateness. If her friend is late, she usually gets angry. For her, lateness is untolerable.

1. What is the text about?
a. Description of Ida
b. Description of the writer
c. Story of Ida
d. Story of the writer
2. "She was born on $12 \ldots$ ?" (1st paragraph, 5th sentence). What does the underline word mean?
a. Ida
b. The writer
c. Ida's mother
d. The writer's mother
3. How does Ida's mother look like?
a. Dark skin, short straight hair, a little bit fat
b. White skin, short curly hair, a little bit fat
c. Dark skin, long straight hair, a little bit fat
d. White skin, long straight hair, a little bit fat
4. When was Ida Born?
a. 12 of June 2006
b. 12 of July 2006
c. 12 of August 2006
d. 12 of September 2006
5. "... she is hate with lateness". The underlined word has closest in meaning to....
a. Love 0
b. Like
c. Dislike
d. Interest
6. What is the main idea of the second paragraph?
a. Ida's physical appearence
b. Ida's personality
c. General information
d. Ida's height

## The text entitled Beratan Lake is for question number 7-12

## Beratan Lake

Bali has many toursim destinasions, one of them is Beratan Lake. It is located in Candikuning Village, Tabanan, Bali. Beratan Lake can be reached easily because it is on the way to Denpasar from Singaraja. People can reach it by using motor bike and car. The entering ticket is also cheap, it is only Rp. 15.000 for local visitor.

The main attraction of this place is the lake. The lake is still natural with mountain panomara in the east part. In the west part, there are two temples, Ulun Danu Beratan dan Dalem temple. The main part of Ulun Danu temple is located in
the lake. It looks like floating on the lake. However, we can not enter the temple. We just can see it from the outside.

In the south part is recreational part. Here, we can rent floating duct, speedboat, and fishing. You have to pay more if you want to use the facilities. The floating duck is more expensive than speed boat because it can only be occupied by two persons. The ticket for the floating duct is Rp.100.000 for one hour. You can also rent fishing equipments if the don't bring them. After enjoying them, you can visit culinary stand in the west part. There are many kinds of food sold, such as : bakso (meat ball), goat satay, rabbit satay, fried chicken, etc.
7. What is the main idea of the first paragraph?
a. General description of Beratan Lake
b. Beratan Lake is located in Tabanan Regency
c. The price of entering ticket to Beratan Lake
d. Easy accessto reach Beratan Lake
8. "It looks like floating...." (2nd paragraph 5th sentence). The underlined word refers to....
a. Beratan Lake
b. Ulun Danu Temple
c. The main part of Ulun Danu temple
d. Dalem temple
9. How much should five people pay to enter Beratan Lake?
a. Rp. 15.000
b. Rp. 30.000
c. Rp. 60.000
d. Rp. 75.000
10. What can you enjoy in the south part of Beratan Lake?
a. Beautiful panorama
b. Ulun Danu temple
c. Recreational site
d. Dalem temple
11. "...have to pay more if..." (3rd paragraph, 3rd sentence). The opposite meaning of the underlined word is.
a. Sell
b. Borrow
c. Buy
d. Give
12. You can get the attractions in Beratan Lake, except....
a. Temple
b. Garden
c. Culinary
d. Mountain panorama

## The text entitled Travelling to Lembongan Island is for question number 1318

## Travelling to Lembongan Island

To enjoy long school vocation last month, my family and I visited Lembongan Island. It is actually part of Bali Province, but the location is accross the sea. We went there in the morning. At 8 AM, we arrived in Sanur harbour. There, my father directly bought ticket for 5 persons. The price is just Rp. 65.000 per person for adult (my father and mother) and Rp. 50.000 for me and older brothers. Before going to the speed boat, we enjoyed sunrise and balinese cakes near the ticket service. Finally, we boarded and went to Lembongan Island at 8.30 AM.

Finally, we arrived in Mushroom Harbour in Lembongan at 9 AM. We directly went to villa which had been booked by my grand father. My father booked for two rooms, one room was for parent and one room for me and my siblings. I put my clothes firtsly, then I and my siblings went to swimming pool. We were so happy because the swimming pool was large. Then, we ordered fried rice and juices. At 11.00 AM , we stopped swimming and prepared for the next destination. At 12.00 AM, we visited Mangrove Harbour to meet Captain Bobo. We were going to see mangrove jungle by boat. After seeing mangrove jungle, we moved to the sea for snorkling. The captain helped us to wear our safety equipments. Then, we did snorkling to see fish and coral reefs. It was so beautiful. We finished snorkling around 5.00 PM and we directly changed our clothes. My father invited us to eat grilled fish in the restaurant near it. We were so happy at that time.
13. The second paragraph tells us about....
a. The beauty of Lembongan Island
b. Trip to Mangrove jungle
c. Snorkling in Lembongan Island
d. The writer's activity in Lembongan Island
14. "It is actually part of Bali Province..." (1st paragraph, 2nd sentence). The underlined word refers to....
a. Lembongan Island
b. Long school vacation
c. Mushroom Harbour
d. Sanur Harbour
15. How much should my parent pay for them?
a. Rp. 65.000
b. Rp. 130.000
c. Rp. 50.000
d. Rp. 280.000
16. The writer and his family did many activities in Lembongan Island, except....
a. Grilling fish
b. Snorkling
c. Visiting mangrove jungle
d. Swimming in the pool
17. "....to see mangrove jungle by boat" (2nd paragraph, 9th sentence). The underlined word has the closest meaning to....
a. Sea
b. Harbour
c. Coral reef
d. Forest
18. What is the purpose of the text?
a. To tell the past event
b. To describe a place
c. To entertaint the reader
d. To tell the procedure to do something

## The text entitled My Lucky Day is for question number 19-24

## My Lucky Day

Yesterday was a lucky day for me. In the morning, my mother cooked my favourite food, pizza. I really loved it because the toping was full of beef and vegetables. Then, I ate it fast because it was still warm. My mother was happy to see me eat the pizza. When I finished, my father invited me to pet farming. There, I helped my father to feed the chicken, duck, and goat. When I entered the duck cage, I saw many eggs. My father asked me to pick them up. I did and calculated the egg amount. I put them in the special place and cleaned them.

In the afternoon, my father and mother sold the eggs together with me to traditional market. My parent looked so happy when they recieved much money. My father asked "let's go to toys shop! You can freely buy toys you want". I was so surprised and happy to hear that. Then, I replied " really? I want to buy playstation". My parents agreed and we directly went to toy shop. Arriving in the toy shop, I directly chose playstation 3. I also bought 1 cassette containing of moto GP and football game. The shopassitant told me how to operate the playstation.

Then, we went home. Arriving at home, I directly set up my playstation. It successfully worked so I could play directly. However, my father told me that there was time limit to play. I was only allowed to play after studying and it was not more than 2 hours a day. I agreed and I was so happy because finally I had my dream toy.
19. What is the purpose of the text?
a. To tell the writer' real experience
b. To tell how the writer get playstation
c. To entertaint the reader about the writer's story
d. To describe the writer's playstation
20. "My parent looked so happy...." (2nd paragraph 2nd sentence). The underlined word refers to....
a. The writer's mother
b. The writer's father
c. The writer's father and mother
d. The writer and shopassitant
21. Which statement is true based on the text?
a. The writer should not study before palying playstation
b. The writer can play playstation freely
c. There is a rule for the writer to play playstation
d. The writer disagree to the rule of playing plastation
22. Why did the writer's father buy playstation for him?
a. He got much money when selling the egg
b. I liked playstation
c. My mother asked my father
d. The writer was happy
23. Who told the writer the way to operate the playstation 3 ?
a. The writer's father
b. The shopassisstant
c. The writer's mother
d. The writer's parent
24. "...with me to traditional market". The underlined word has opposite meaning to....
a. Old
b. Classic
c. Modern
d. Ancient

The conversation below is for question number 25-30
Mira : I hear that-Bayu gets 100 for math test. Is that right?
Devi : No, he only gets 90 . He makes 1 mistake. How about you?
Gita : I gets 100. I really study hard for it.
Mira : congratulation, you are great. I only get 85 . It is very difficult for me.
Devi : don't be worry! I also get 85. It is difficult also for me.
Mira : Gita, can I borrow your math examination? I want to learn in which part I make mistake.

Gita : sure, I will give you in the class because I put it in my bag.
Mira : thank you, let's order food and drink now!
Gita : I only order drink.
25. What are the speakers talking about?
a. Math test score
b. Bayu
c. Math test difficulty
d. Food and drink
26. "It is very difficult for me". (Mira's utterance). The underlined word refers to....
a. Mira's math score
b. Math test
c. Math score
d. Mistake
27. Which statement is true based on the text?
a. The conversation is done in the library
b. Devi is cleverer than Bayu
c. Gita is the cleverest student in math
d. Gita order certain food
28. Why does Mira want to borrow Gita's test?
a. She wants to learn it
b. She wants to give to Devi
c. Gita is cleverer than her
d. Mira loves Gita's writing
29. Where will Gita give her math test result?
a. In the classroom
b. In the library
c. In the canteen
d. In her house
30. "He makes 1 mistake". The underlined word has closest meaning to.
a. Wrong
b. True
c. Correct
d. Right

Note : * the red items are invalid so the items are excluded

## Appendix 2 : Validation Process

## 1. Item Validity

| No Students Code |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 | 5 |
| 1 | A01 | 0 | 1 | 0 | 1 | 1 |
| 2 | A02 | 1 | 1 | 1 | 1 | 1 |
| 3 | A03 | 0 | 1 | 0 | 1 | 0 |
| 4 | A04 | 1 | 1 | 1 | 0 | 1 |
| 5 | A05 | 0 | 0 | 0 | 0 | 1 |
| 6 | A06 | 1 | 0 | 1 | 0 | 1 |
| 7 | A07 | 0 | 0 | 0 | 0 | 1 |
| 8 | A08 | 1 | 1 | 1 | 1 | 1 |
| 9 | A09 | 0 | 1 | 1 | 0 | 0 |
| 10 | A10 | 1 | 0 | 1 | 1 | 1 |
| 11 | A11 | 1 | 1 | 0 | 1 | 0 |
| 12 | A12 | 0 | 0 | 1 | 0 | 0 |
| 13 | A13 | 1 | 1 | 1 | 1 | 1 |
| 14 | A14 | 1 | 1 | 0 | 0 | 0 |
| 15 | A15 | 0 | 0 | 1 | 1 | 0 |
| 16 | A16 | 1 | 0 | 1 | 0 | 1 |
| 17 | A17 | 1 | 0 | 1 | 0 | 1 |
| 18 | A18 | 1 | 1 | 1 | 1 | 0 |
| 19 | A19 | 1 | 0 | 0 | 1 | 1 |
| 20 | A20 | 1 | 0 | 1 | 1 | 0 |
| 21 | A21 | 0 | 1 | 1 | 0 | 1 |
| 22 | A22 | 1 | 1 | 1 | 1 | 0 |
| 23 | A23 | 0 | 1 | 1 | 1 | 1 |
| 24 | A24 | 1 | 10 | \% 1 | 0 | 0 |
| 25 | A25 | 1 | 1 | 1 | 1 | 1 |
| 26 | A26 | $-1$ | 0 | 0 | 0 | 1 |
| 27 | A27 | 0 | 0 | 1 | 1 | 0 |
| 28 | A28 | 1 | 1 | 1 | 1 | 1 |
| 29 | A29 | 0 | 1 | 1 | 1 | 1 |
| 30 | A30 | 1 | 1 | 1 | 1 | 1 |
| 31 | A31 | 1 | 1 | 1 | 1 | 1 |
| 32 | A32 | 1 | 1 | 0 | 1 | 0 |
| 33 | A33 | 1 | 1 | 1 | 0 | 1 |
| 34 | A34 | 0 | 0 | 0 | 0 | 1 |


| 35 | A 35 | 1 | 0 | 1 | 0 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 36 | A 36 | 0 | 0 | 0 | 0 | 1 |
| 37 | A 37 | 1 | 1 | 1 | 1 | 1 |
| 38 | A 38 | 0 | 0 | 0 | 1 | 0 |
| 39 | A 39 | 1 | 0 | 0 | 0 | 1 |
| 40 | A 40 | 0 | 0 | 0 | 0 | 0 |
| Total Benar | 25 | 21 | 26 | 22 | 26 |  |
| p | 0,625 | 0,525 | 0,65 | 0,55 | 0,65 |  |
| q | 0,375 | 0,475 | 0,35 | 0,45 | 0,35 |  |
| Rerata (Mp) | 22,32 | 23,8095 | 21,8462 | 22,3182 | 22,4231 |  |
| Rerata (MIt)= | 18,725 | 18,725 | 18,725 | 18,725 | 18,725 |  |
| Standar Deviasi $($ | 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 |  |
| ) | 0,58967 | 0,67916 | 0,54041 | 0,50471 | 0,6403 |  |
| rpb | 0,312 | 0,312 | 0,312 | 0,312 | 0,312 |  |
| r- kritis | Valid | Valid | Valid | Valid | Valid |  |
| Status Butir |  |  |  |  |  |  |


|  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 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 | 0 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |


| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 26 | 27 | 26 | 21 | 26 | 22 | 27 | 27 | 27 |
| 0,65 | 0,675 | 0,65 | 0,525 | 0,65 | 0,55 | 0,675 | 0,675 | 0,675 |
| 0,35 | 0,325 | 0,35 | 0,475 | 0,35 | 0,45 | 0,325 | 0,325 | 0,325 |
| 20,2308 | 22,1111 | 21,4231 | 23,8095 | 21,4231 | 22,3182 | 20,2593 | 21,6667 | 22,5556 |
| 18,725 | 18,725 | 18,725 | 18,725 | 18,725 | 18,725 | 18,725 | 18,725 | 18,725 |
| 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 |
| 0,26072 | 0,62001 | 0,46716 | 0,67916 | 0,46716 | 0,50471 | 0,28093 | 0,53863 | 0,70139 |
| 0,312 | 0,312 | 0,312 | 0,312 | 0,312 | 0,312 | 0,312 | 0,312 | 0,312 |
| Invalid | Valid | Valid | Valid | Valid | Valid | Invalid | Valid | Valid |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|  |  |  |  |  |  |  |  |  |
|  | 0 | 0 | 11 |  |  |  |  |  |


| 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |


| 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |
| 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |
| 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| 1 | 1 | - 0 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 0 | 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 |
| 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 1 | 0 | $-1$ | 1 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 1 | - 0 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 27 | 27 | 26 | 27 | 23 | 21 | 27 | 27 | 23 |
| 0,675 | 0,675 | 0,675 | 0,675 | 0,575 | 0,525 | 0,675 | 0,65 | 0,575 |
| 0,325 | 0,325 | 0,325 | 0,325 | 0,425 | 0,475 | 0,325 | 0,35 | 0,425 |
| 21,3333 | 21,7407 | 22,1481 | 19,9259 | 22,9565 | 23,8095 | 22,1481 | 20,2308 | 22,9565 |
| 18,725 | 18,725 | 18,725 | 18,725 | 18,725 | 18,725 | 18,725 | 18,725 | 18,725 |


| 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0,47759 | 0,55219 | 0,62679 | 0,21989 | 0,62535 | 0,67916 | 0,62679 | 0,26072 | 0,62535 |
| 0,312 | 0,312 | 0,312 | 0,312 | 0,312 | 0,312 | 0,312 | 0,312 | 0,312 |
| Valid | Valid | Valid | Invalid | Valid | Valid | Valid | Invalid | Valid |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |


|  |  |  |  |  |  |  | MI | MI2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |  |  |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 | 27 | 729 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 30 | 900 |
| 0 | 1 | 1 | 1 | 0 | 1 | 0 | 15 | 225 |
| 1 | 1 | 0 | 0 | 1 | 1 | 1 | 26 | 676 |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 16 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 20 | 400 |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 6 | 36 |
| 1 | 1 | 2-1 | 1 | 1 | 1 | 1 | 28 | 784 |
| 1 | 1 | 0 | 0 | 1 | 1 | 0 | 20 | 400 |
| 1 | 1 | 1 | 1 | 0 | 0 | 1 | 21 | 441 |
| 1 | 1 | 1 | 1 | 1 | 0 | 1 | 24 | 576 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 13 | 169 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 29 | 841 |
| 1 | 1 | 0 | 0 | 0 | 1 | 1 | 20 | 400 |
| 1 | 0 | 1 | 1 | 1 | 0 | 0 | 14 | 196 |
| 1 | 1 | 0 | 0 | 0 | 0 | 1 | 16 | 256 |
| 1 | 1 | 0 | 0 | 1 | 1 | 1 | 22 | 484 |
| 1 | 1 | 1 | 1 | 0 | 0 | 1 | 20 | 400 |
| 1 | 1 | 1 | 1 | 0 | 0 | 1 | 20 | 400 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 25 | 625 |
| 0 | 0 | 0 | 0 | 1 | 1 | 0 | 15 | 225 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 25 | 625 |
| 1 | 0 | 1 | 1 | 1 | 1 | 0 | 22 | 484 |
| 0 | 1 | 0 | - 0 | 0 | 0 | 1 | 11 | 121 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 26 | 676 |
| 1 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 64 |
| 0 | 0 | 1 | 1 | 0 | 0 | 0 | 11 | 121 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 24 | 576 |
| 1 | 0 | 1 | 1 | 1 | 1 | 0 | 22 | 484 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 29 | 841 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 29 | 841 |
| 0 | 1 | 1 | 1 | 0 | 1 | 1 | 17 | 289 |


| 1 | 0 | 0 | 0 | 1 | 1 | 1 | 24 | 576 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0 | 0 | 0 | 1 | 1 | 0 | 7 | 49 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 18 | 324 |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 7 | 49 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 28 | 784 |
| 0 | 0 | 1 | 1 | 0 | 0 | 0 | 5 | 25 |
| 1 | 0 | 0 | 0 | 1 | 1 | 1 | 18 | 324 |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 9 |
| 27 | 26 | 22 | 22 | 27 | 23 | 25 | 749 | 16441 |
| 0,675 | 0,65 | 0,55 | 0,55 | 0,675 | 0,575 | 0,625 |  |  |
| 0,325 | 0,35 | 0,45 | 0,45 | 0,325 | 0,425 | 0,375 |  |  |
| 22,037 | 22,4231 | 22,3182 | 22,3182 | 20,2593 | 22,9565 | 22,32 |  |  |
| 18,725 | 18,725 | 18,725 | 18,725 | 18,725 | 18,725 | 18,725 |  |  |
| 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 | 7,87071 |  |  |
| 0,60645 | 0,6403 | 0,50471 | 0,50471 | 0,28093 | 0,62535 | 0,58967 |  |  |
| 0,312 | 0,312 | -0,312 | 0,312 | 0,312 | 0,312 | 0,312 |  |  |
| Valid | Valid | Valid | Valid | Invalid | Valid | Valid |  |  |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |  |  |

## Item Validity Test by Point Biserial Formula

| No | Item | rcounted | r- <br> critical | Note | Decision |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Item 1 | 0,58967 | 0,312 | Valid | Used |
| 2 | Item 2 | 0,67916 | 0,312 | Valid | Used |
| 3 | Item 3 | 0,54041 | 0,312 | Valid | Used |
| 4 | Item 4 | 0,50471 | 0,312 | Valid | Used |
| 5 | Item 5 | 0,6403 | 0,312 | Valid | Used |
| 6 | Item 6 | 0,26072 | 0,312 | Invalid | Excluded |
| 7 | Item 7 | 0,62001 | 0,312 | Valid | Used |
| 8 | Item 8 | 0,46716 | 0,312 | Valid | Used |
| 9 | Item 9 | 0,67916 | 0,312 | Valid | Used |
| 10 | Item 10 | 0,46716 | 0,312 | Valid | Used |
| 11 | Item 11 | 0,50471 | 0,312 | Valid | Used |
| 12 | Item 12 | 0,28093 | 0,312 | Invalid | Excluded |
| 13 | Item 13 | 0,53863 | 0,312 | Valid | Used |
| 14 | Item 14 | 0,70139 | 0,312 | Valid | Used |
| 15 | Item 15 | 0,47759 | 0,312 | Valid | Used |
| 16 | Item 16 | 0,55219 | 0,312 | Valid | Used |
| 17 | Item 17 | 0,62679 | 0,312 | Valid | Used |
| 18 | Item 18 | 0,21989 | 0,312 | Invalid | Excluded |


| 19 | Item 19 | 0,62535 | 0,312 | Valid | Used |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 20 | Item 20 | 0,67916 | 0,312 | Valid | Used |
| 21 | Item 21 | 0,62679 | 0,312 | Valid | Used |
| 22 | Item 22 | 0,26072 | 0,312 | Invalid | Excluded |
| 23 | Item 23 | 0,62535 | 0,312 | Valid | Used |
| 24 | Item 24 | 0,60645 | 0,312 | Valid | Used |
| 25 | Item 25 | 0,6403 | 0,312 | Valid | Used |
| 26 | Item 26 | 0,50471 | 0,312 | Valid | Used |
| 27 | Item 27 | 0,50471 | 0,312 | Valid | Used |
| 28 | Item 28 | 0,28093 | 0,312 | Invalid | Excluded |
| 29 | Item 29 | 0,62535 | 0,312 | Valid | Used |
| 30 | Item 30 | 0,58967 | 0,312 | Valid | Used |
|  | Valid | 25 |  |  |  |
|  | Invalid | 5 |  |  |  |
|  |  |  |  |  |  |

2. Reliability


| 39 | A39 | 1 | 0 | 0 | 0 | 1 |
| :---: | :---: | ---: | ---: | ---: | ---: | ---: |
| 40 | A40 | 0 | 0 | 0 | 0 | 0 |
| Total Correct | 25 | 21 | 26 | 22 | 26 |  |
| $\mathbf{p}$ | 0,625 | 0,525 | 0,65 | 0,55 | 0,65 |  |
| $\mathbf{q}$ | 0,375 | 0,475 | 0,35 | 0,45 | 0,35 |  |
| Deviation |  |  |  |  |  |  |
| Standard | 6,94553 | 6,94553 | 6,94553 | 6,94553 | 6,94553 |  |
| $\mathbf{p}{ }^{\star} \mathbf{q}$ | 0,234375 | 0,249375 | 0,2275 | 0,2475 | 0,2275 |  |
| 「 $\mathbf{p}^{\star} \mathbf{q}$ | 5,840625 |  |  |  |  |  |
| RELIABILITY | 0,915549 |  |  |  |  |  |


| 7 | 8 | 9 | 10 | 11 | 13 | 14 | 15 | 16 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 1 | 1 | 1 | -1 | 1 | 1 | 1 | 0 | 1 |
| 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 |
| 0 | 0 | 1 | 0 | 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 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 26 | 21 | 26 | 22 | 27 | 27 | 27 | 27 |
| 0,675 | 0,65 | 0,525 | 0,65 | 0,55 | 0,675 | 0,675 | 0,675 | 0,675 |
| 0,325 | 0,35 | 0,475 | 0,35 | 0,45 | 0,325 | 0,325 | 0,325 | 0,325 |
| 6,94553 | 6,94553 | 6,94553 | 6,94553 | 6,94553 | 6,94553 | 6,94553 | 6,94553 | 6,94553 |
| 0,219375 | 0,2275 | 0,249375 | 0,2275 | 0,2475 | 0,219375 | 0,219375 | 0,219375 | 0,219375 |


| 17 | 19 | 20 | 21 | 23 | 24 | 25 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|  | 1 |  | 1 |  |  |  |


| 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 1 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 23 | 21 | 27 | 23 | 27 | 26 |
| 0,65 | 0,575 | 0,525 | 0,675 | 0,575 | 0,675 | 0,65 |
| 0,35 | 0,425 | 0,475 | 0,325 | 0,425 | 0,325 | 0,35 |
| 6,94553 | 6,94553 | 6,94553 | 6,94553 | 6,94553 | 6,94553 | 6,94553 |
| 0,2275 | 0,244375 | 0,249375 | 0,219375 | 0,244375 | 0,219375 | 0,2275 |


|  |  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 26 | 27 | 29 | 30 |  | MI2 |
| 1 | 1 | 1 | 0 | 22 | 484 |
| 1 | 1 | 1 | 1 | 25 | 625 |
| 1 | 1 | 1 | 0 | 14 | 196 |
| 0 | 0 | 1 | 1 | 21 | 441 |
| 0 | 0 | 0 | 0 | 2 | 4 |
| 0 | 0 | 0 | 1 | 15 | 225 |
| 0 | 0 | 0 | 0 | 4 | 16 |
| 1 | 1 | 1 | 1 | 23 | 529 |
| 0 | 0 | 1 | 0 | 15 | 225 |
| 1 | 1 | 0 | 1 | 18 | 324 |
| 1 | 1 | 0 | 1 | 19 | 361 |
| 0 | 0 | 0 | 0 | 11 | 121 |
| 1 | 1 | 1 | 1 | 25 | 625 |
| 0 | 0 | 1 | 1 | 17 | 289 |
| 1 | 1 | 0 | 0 | 10 | 100 |
| 0 | 0 | 0 | 1 | 13 | 169 |
| 0 | 0 | 1 | 1 | 18 | 324 |
| 1 | 1 | 0 | 1 | 17 | 289 |
| 1 | 1 | 0 | 1 | 18 | 324 |
|  |  |  |  |  |  |


| 1 | 1 | 1 | 1 | 20 | 400 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0 | 1 | 0 | 12 | 144 |
| 1 | 1 | 1 | 1 | 22 | 484 |
| 1 | 1 | 1 | 0 | 18 | 324 |
| 0 | 0 | 0 | 1 | 9 | 81 |
| 1 | 1 | 1 | 1 | 22 | 484 |
| 0 | 0 | 0 | 1 | 7 | 49 |
| 1 | 1 | 0 | 0 | 10 | 100 |
| 1 | 1 | 1 | 1 | 21 | 441 |
| 1 | 1 | 1 | 0 | 18 | 324 |
| 1 | 1 | 1 | 1 | 24 | 576 |
| 1 | 1 | 1 | 1 | 24 | 576 |
| 1 | 1 | 1 | 1 | 16 | 256 |
| 0 | 0 | 1 | 1 | 20 | 400 |
| 0 | 0 | 1 | 0 | 17 | 25 |
| 0 | 0 | 0 | 1 | 13 | 169 |
| 0 | 0 | 0 | 0 | 4 | 16 |
| 1 | 1 | 1 | 1 | 24 | 576 |
| 1 | 1 | 0 | 0 | 4 | 16 |
| 0 | 0 | 1 | 1 | 15 | 225 |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 22 | 23 | 25 | 12 |  |
| 0,55 | 0,55 | 0,575 | 0,625 |  |  |
| 0,45 | 0,45 | 0,425 | 0,375 |  |  |
| 6,94553 | 6,94553 | 6,94553 | 6,94553 |  |  |
| 0,2475 | 0,2475 | 0,244375 | 0,234375 |  |  |

## Reliability Testing by KR21

$$
r_{11}=\left(\frac{n}{n-1}\right)\left(\frac{S^{2}-\sum p q}{S^{2}}\right)
$$

$$
r 11=\left(\frac{25}{25-1}\right)\left(\frac{6,95^{2}-5,84}{6,95^{2}}\right)
$$

$\mathbf{r}_{11}=\mathbf{0 , 9 2}$
This value means that the tes has very high reliability

## 3. Level of Difficulty



| 40 | A40 | 0 | 0 | 0 | 0 |
| :---: | ---: | ---: | ---: | ---: | ---: |
| 0 |  |  |  |  |  |
| Total Benar | 25 | 21 | 26 | 22 | 26 |
| $\mathbf{l}$ | 0,625 | 0,525 | 0,65 | 0,55 | 0,65 |
| Keterangan | Average | Average | Average | Average | Average |



| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 26 | 21 | 26 | 22 | 27 | 27 | 27 |
| 0,675 | 0,65 | 0,525 | 0,65 | 0,55 | 0,675 | 0,675 | 0,675 |
| Average | Average | Average | Average | Average | Average | Average | Average |


| 16 | 17 | 19 | 20 | 21 | 23 | 24 | 25 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | - 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 1 | 1 | -1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |


| 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 26 | 23 | 21 | 27 | 23 | 27 | 26 |
| 0,675 | 0,65 | 0,575 | 0,525 | 0,675 | 0,575 | 0,675 | 0,65 |
| Average | Average | Average | Average | Average | Average | Average | Average |


|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 26 | 27 | 29 | 30 |  | MI2 |
| 1 | 1 | 1 | 0 | 22 | 484 |
| 1 | 1 | 1 | 1 | 25 | 625 |
| 1 | 1 | 1 | 0 | 14 | 196 |
| 0 | 0 | 1 | 1 | 21 | 441 |
| 0 | 0 | 0 | 0 | 2 | 4 |
| 0 | 0 | 0 | 1 | 15 | 225 |
| 0 | 0 | 0 | 0 | 4 | 16 |
| 1 | 1 | 1 | 1 | 23 | 529 |
| 0 | 0 | 1 | 0 | 15 | 225 |
| 1 | 1 | 0 | 1 | 18 | 324 |
| 1 | 1 | 0 | 1 | 19 | 361 |
| 0 | 0 | 0 | 0 | 11 | 121 |
| 1 | 1 | 1 | 1 | 25 | 625 |
| 0 | 0 | 1 | 1 | 17 | 289 |
| 1 | 1 | 0 | 0 | 10 | 100 |
| 0 | 0 | 0 | 1 | 13 | 169 |
| 0 | 0 | 1 | 1 | 18 | 324 |
| 1 | 1 | 0 | 1 | 17 | 289 |
| 1 | 1 | 0 | 1 | 18 | 324 |
| 1 | 1 | 1 | 1 | 20 | 400 |
| 0 | 0 | 1 | 0 | 12 | 144 |
| 1 | 1 | 1 | 1 | 22 | 484 |
| 1 | 1 | 1 | 0 | 18 | 324 |
| 0 | 0 | 0 | 1 | 9 | 81 |
| 1 | 1 | 1 | 1 | 22 | 484 |
| 0 | 0 | 0 | 1 | 7 | 49 |
| 1 | 1 | 0 | 0 | 10 | 100 |
| 1 | 1 | 1 | 1 | 21 | 441 |
| 1 | 1 | 1 | 0 | 18 | 324 |


| 1 | 1 | 1 | 1 | 24 | 576 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 24 | 576 |
| 1 | 1 | 1 | 1 | 16 | 256 |
| 0 | 0 | 1 | 1 | 20 | 400 |
| 0 | 0 | 1 | 0 | 5 | 25 |
| 0 | 0 | 0 | 1 | 13 | 169 |
| 0 | 0 | 0 | 0 | 4 | 16 |
| 1 | 1 | 1 | 1 | 24 | 576 |
| 1 | 1 | 0 | 0 | 4 | 16 |
| 0 | 0 | 1 | 1 | 15 | 225 |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 22 | 23 | 25 |  |  |
| 0,55 | 0,55 | 0,575 | 0,625 |  |  |
| Average | Average | Average | Average |  |  |

Level of Difficulty

| No | Item | I | Note | Decision |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 0,025 | Average | Used |
| 2 | 2 | 0,05 | Average | Used |
| 3 | 3 | 0,075 | Average | Used |
| 4 | 4 | 0,1 | Average | Used |
| 5 | 5 | 0,125 | Average | Used |
| 6 | 7 | 0,175 | Average | Used |
| 7 | 8 | 0,2 | Average | Used |
| 8 | 9 | 0,225 | Average | Used |
| 9 | 10 | 0,25 | Average | Used |
| 10 | 11 | 0,275 | Average | Used |
| 11 | 13 | 0,325 | Average | Used |
| 12 | 14 | 0,35 | Average | Used |
| 13 | 15 | 0,375 | Average | Used |
| 14 | 16 | 0,4 | Average | Used |
| 15 | 17 | 0,425 | Average | Used |
| 16 | 19 | 0,475 | Average | Used |
| 17 | 20 | 0,5 | Average | Used |
| 18 | 21 | 0,525 | Average | Used |
| 19 | 23 | 0,575 | Average | Used |
| 20 | 24 | 0,6 | Average | Used |
| 21 | 25 | 0,625 | Average | Used |
| 22 | 26 | 0,65 | Average | Used |
| 23 | 27 | 0,675 | Average | Used |
| 24 | 29 | 0,725 | Average | Used |
| 25 | 30 | 0,75 | Average | Used |
|  | Difficult | 25 |  |  |
| Average | 0 |  |  |  |
|  | Easy | 0 |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## 4. Descrimination Index

| No | Students Code |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 3 | 4 | 5 |
| 1 | A02 | 1 | 1 | 1 | 1 | 1 |
| 2 | A13 | 1 | 1 | 1 | 1 | 1 |
| 3 | A30 | 1 | 1 | 1 | 1 | 1 |
| 4 | A31 | 1 | 1 | 1 | 1 | 1 |
| 5 | A37 | 1 | 1 | 1 | 1 | 1 |
| 6 | A08 | 1 | 1 | 1 | 1 | 1 |
| 7 | A22 | 1 | 1 | 1 | 1 | 0 |
| 8 | A25 | 1 | 1 | 1 | 1 | 1 |
| 9 | A01 | 0 | 1 | 0 | 1 | 1 |
| 10 | A28 | 1 | 1 | 1 | 1 | 1 |
| 11 | A04 | 1 | 1 | 1 | 0 | 1 |
| 12 | A20 | 1 | 0 | 1 | 1 | 0 |
| 13 | A33 | 1 | 1 | 1 | 0 | 1 |
| 14 | A11 | 1 | 1 | 0 | - 1 | 0 |
| 15 | A10 | 1 | 0 | 1 | 1 | 1 |
| 16 | A17 | 1 | 0 | 1 | 0 | 1 |
| 17 | A19 | 1 | 0 | 0 | 1 | 1 |
| 18 | A23 | 0 | 1 | 1 | 1 | 1 |
| 19 | A29 | 0 | 1 | 1 | 1 | 1 |
| 20 | A14 | 1 | 1 | 0 | 0 | 0 |
| 21 | A18 | 1 | 1 | 1 | 1 | 0 |
| 22 | A32 | 1 | 1 | 0 | 1 | 0 |
| 23 | A39 | 1 | 0 | 0 | 0 | 1 |
| 24 | A09 | 0 | 1 | 1 | 0 | 0 |
| 25 | A06 | 1 | 0 | 1 | 0 | 1 |
| 26 | A03 | 0 | 1 | 0 | 1 | 0 |
| 27 | A16 | 1 | 0 | 1 | 0 | 1 |
| 28 | A35 | 1 | 0 | 1 | 0 | 1 |
| 29 | A21 | 0 | 1 | 1 | 0 | 1 |
| 30 | A12 | 0 | 0 | 1 | 0 | 0 |
| 31 | A15 | 0 | 0 | 1 | 1 | 0 |
| 32 | A27 | 0 | 0 | 1 | 1 | 0 |
| 33 | A24 | 1 | 0 | 1 | 0 | 0 |
| 34 | A26 | 1 | 0 | 0 | 0 | 1 |
| 35 | A34 | 0 | 0 | 0 | 0 | 1 |
| 36 | A07 | 0 | 0 | 0 | 0 | 1 |
| 37 | A36 | 0 | 0 | 0 | 0 | 1 |
| 38 | A38 | 0 | 0 | 0 | 1 | 0 |
| 39 | A05 | 0 | 0 | 0 | 0 | 1 |


| A40 | 0 | 0 | 0 | 0 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| TOTAL JAWABAN BENAR | 25 | 21 | 26 | 22 | 26 |
| JA | 11 | 11 | 11 | 11 | 11 |
| JB | 11 | 11 | 11 | 11 | 11 |
| BA | 10 | 11 | 10 | 10 | 10 |
| BB | 2 | 0 | 4 | 3 | 5 |
| PA | 0,909091 | 1 | 0,909091 | 0,909091 | 0,909091 |
| PB | 0,181818 | 0 | 0,363636 | 0,272727 | 0,454545 |
| D | 0,727273 | 1 | 0,545455 | 0,636364 | 0,454545 |
| KET | VG | VG | VG | VG | VG |

VG: Very Good
A : $\quad$ Average + Revision
L: Less + Revision
B : Bad + excluded

| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 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 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | - 0 | 1 | 1 | 1 .- | 1 | 1 |
| 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |


| 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 26 | 20 | 26 | 22 | 27 | 27 | 27 |
| 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 11 | 9 | 11 | 9 | 10 | 11 | ) 10 | 9 |
| 3 | 3 | 0 | 3 | 3 | 5 | 3 | 4 |
|  | 0,81818 |  | 0,81818 | 0,90909 |  | 0,90909 | 0,81818 |
| 1 | - 2 | 1 | 2 | 1 | 1 | 1 | 2 |
| 0,27272 | 0,27272 |  | 0,27272 | 0,27272 | 0,45454 | 0,27272 | 0,36363 |
| 7 | 7 | 0 | 7 | 7 | 5 | 7 | 6 |
| 0,72727 | 0,54545 |  | 0,54545 | 0,63636 | 0,54545 | 0,63636 | 0,45454 |
| 3 | 5 | 1 | 5 | 4 | 5 | 4 | 5 |
| VG | VG | VG | VG | VG | VG | VG | VG |


| 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |


| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 26 | 23 | 21 | 27 | 23 | 27 | 26 |
| 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 9 | 10 | 11 | 11 | 9 | 11 | 9 | 11 |
| 4 | 5 | 1 | 0 | 3 | 1 | 3 | 2 |
| $\begin{array}{r} 0,81818 \\ 2 \end{array}$ | $0,90909$ | 1 | 1 | $0,81818$ | $1$ | $0,81818$ | 1 |
| 0,36363 | 0,45454 | 0,09090 |  | 0,27272 | 0,09090 | 0,27272 | 0,18181 |
| 6 | 5 | -- | 0 | 7 | 9 | 7 | 8 |
| 0,45454 | 0,45454 | 0,90909 | $\cdots$ | 0,54545 | 0,90909 | 0,54545 | 0,81818 |
| 5 | 5 | 1 | 1 | 5 | 1 | 5 | 2 |
| VG | VG | VG | VG | VG | VG | VG | VG |

$\mathrm{MI} \quad \mathrm{MI} 2$

| 22 | 23 | 24 | 25 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 25 | 625 |
| 1 | 1 | 1 | 1 | 25 | 625 |
| 1 | 1 | 1 | 1 | 24 | 576 |


| 1 | 1 | 1 | 1 | 24 | 576 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 24 | 576 |
| 1 | 1 | 1 | 1 | 23 | 529 |
| 1 | 1 | 1 | 1 | 22 | 484 |
| 1 | 1 | 1 | 1 | 22 | 484 |
| 1 | 1 | 1 | 0 | 22 | 484 |
| 1 | 1 | 1 | 1 | 21 | 441 |
| 0 | 0 | 1 | 1 | 21 | 441 |
| 1 | 1 | 1 | 1 | 20 | 400 |
| 0 | 0 | 1 | 1 | 20 | 400 |
| 1 | 1 | 0 | 1 | 19 | 361 |
| 1 | 1 | 0 | 1 | 18 | 324 |
| 0 | 0 | 1 | 1 | 18 | 324 |
| 1 | 1 | 0 | 1 | 18 | 324 |
| 1 | 1 | 1 - | 0 | 18 | 324 |
| 1 | 1 | 1. | 0 | 18 | 324 |
| 0 | 0 | 1 | 1 | 17 | 289 |
| 1 | 1 | 0 | 1 | 17 | 289 |
| 1 | 1 | 1 | 1 | 16 | 256 |
| 0 | 0 | 1 | 1 | 15 | 225 |
| 0 | 0 | 1 | 0 | 15 | 225 |
| 0 | 0 | 0 | 1 | 15 | 225 |
| 1 | 1 | 1 | 0 | 14 | 196 |
| 0 | 0 | 0 | 1 | 13 | 169 |
| 0 | 0 | 0 | 1 | 13 | 169 |
| 0 | 0 | 1 | 0 | 12 | 144 |
| 0 | 0 | 0 | 0 | 11 | 121 |
| 1 | 1 | 0 | 0 | 10 | 100 |
| 1 | 1 | 0 | 0 | 10 | 100 |
| 0 | 0 | 0 | 1 | 9 | 81 |
| 0 | 0 | 0 | 1 | 7 | 49 |
| 0 | 0 | 1 | 0 | 5 | 25 |
| 0 | 0 | 0 | 0 | 4 | 16 |
| 0 | 0 | 0 | 0 | 4 | 16 |
| 1 | 1 | 0 | 0 | 4 | 16 |
| 0 | 0 | 0 | 0 | 2 | 4 |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 22 | 23 | 25 | 615 | 11337 |
| 11 | 11 | 11 | 11 | 11 | 11 |
| 11 | 11 | 11 | 11 | 11 | 11 |
| 10 | 10 | 11 | 10 |  |  |
| 3 | 3 | 1 | 2 |  |  |
| 0,909091 | 0,909091 | 1 | 0,909091 |  |  |


| 0,272727 | 0,272727 | 0,090909 | 0,181818 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 0,636364 | 0,636364 | 0,909091 | 0,727273 |  |  |
| VG | VG | VG | VG |  |  |

Discrimination Index

| No | Item | D | Note | Decision |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 0,72727 | VG | Used |
| 2 | 2 | 1 | VG | Used |
| 3 | 3 | 0,54545 | VG | Used |
| 4 | 4 | 0,63636 | VG | Used |
| 5 | 5 | 0,45455 | VG | Used |
| 6 | 7 | 0,72727 | VG | Used |
| 7 | 8 | 0,54545 | 1 VG | Used |
| 8 | 9 | - 1 | VG | Used |
| 9 | 10 | 0,54545 | VG | Used |
| 10 | 11 | 0,63636 | VG | Used |
| 11 | 13 | 0,54545 | VG | Used |
| 12 | -14 | 0,63636 | VG | Used |
| 13 | - 15 | 0,45455 | VG | Used |
| 14 | 16 | 0,45455 | VG | Used |
| 15 | 17 | 0,45455 | VG | Used |
| 16 | 19 | 0,90909 | VG | Used |
| 17 | 20 | -1 | VG | Used |
| 18 | 21 | 0,54545 | VG | Used |
| 19 | 23 | 0,90909 | VG | Used |
| 20 | 24 | 0,54545 | VG | Used |
| 21 | 25 | 0,81818 | VG | Used |
| 22 | 26 | 0,63636 | VG | Used |
| 23 | 27 | 0,63636 | VG | Used |
| 24 | 29 | 0,90909 | VG | Used |
| 25 | 30 | 0,72727 | VG | Used --a |
| VG : | Very Good | 25 |  |  |
| A : | Average + Revision | 0 |  |  |
| L: | Less + Revision | 0 |  |  |
| B | Bad + excluded | 0 |  |  |

## Appendix 3 Data Analysis

|  | 1 | 6 | 11 | 16 | 21 | Total | Value |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 1 | 1 | 2 | 40 |
| 3 | 1 | 0 | 0 | 0 | 0 | 1 | 20 |
| 4 | 0 | 0 | 1 | 0 | 0 | 1 | 20 |
| 5 | 0 | 0 | 0 | 1 | 1 | 2 | 40 |
| 6 | 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 7 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 8 | 0 | 0 | 0 | 1 | 0 | 1 | 20 |
| 9 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 10 | 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 11 | 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 12 | 1 | 0 | 0 | 1 | 0 | 2 | 40 |
| 13 | 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 14 | 1 | 0 | 1 | 0 | 1 | 3 | 60 |
| 15 | 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 16 | 1 | 0 | 1 | 0 | 1 | 3 | 60 |
| 17 | 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 18 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 19 | 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 20 | 0 | 0 | 0 | 1 | 1 | 2 | 40 |
| 21 | 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 22 | 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 23 | 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 24 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 25 | 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 26 | 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 27 | 1 | 0 | 0 | 0 | 0 | 1 | 20 |
| 28 | 0 | 0 | 1 | 0 | 1 | 2 | 40 |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 1 | 0 | 0 | 0 | 1 | 20 |
| 31 | 0 | 0 | 1 | 1 | 1 | 3 | 60 |
| 32 | 1 | 0 | 1 | 0 | 0 | 2 | 40 |
| 33 | 0 | 0 | 0 | 0 | 1 | 1 | 20 |
| 34 | 1 | 0 | 0 | 1 | 0 | 2 | 40 |
| 35 | 0 | 0 | 1 | 0 | 1 | 2 | 40 |
| 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 38 | 1 | 0 | 0 | 1 | 1 | 3 | 60 |
| 39 | 1 | 1 | 1 | 0 | 1 | 4 | 80 |
| 40 | 1 | 1 | 1 | 0 | 1 | 4 | 80 |
|  |  |  |  |  |  |  |  |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 0 |


| 41 | 1 | 0 | 1 | 1 | 0 | 3 | 60 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 42 | 1 | 0 | 1 | 0 | 1 | 3 | 60 |
| 43 | 1 | 0 | 0 | 0 | 0 | 1 | 20 |
| 44 | 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 45 | 0 | 0 | 1 | 0 | 0 | 1 | 20 |
| 46 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 47 | 0 | 0 | 1 | 0 | 0 | 1 | 20 |
| 48 | 1 | 0 | 1 | 0 | 0 | 2 | 40 |
| 49 | 1 | 0 | 1 | 0 | 1 | 3 | 60 |
| 50 | 0 | 0 | 1 | 1 | 1 | 3 | 60 |
| 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52 | 1 | 1 | 0 | 0 | 1 | 3 | 60 |
| 53 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 54 | 0 | 1 | 1 | 0 | 1 | 3 | 60 |
| 55 | 1 | 1 | 1 | 11 | 1 | 5 | 100 |
| 56 | 1 | 1 | 1 | 1 | 12 | 5 | 100 |
| 57 | 0 | 1 | 0 | 1 | 1 | 3 | 60 |
| 58 | 1 | 1 | 1 | (1) 1 | 1 | 5 | 100 |
| 59 | 0 | 1 | 0 | 1 | 1 | 3 | 60 |
| 60 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 61 | 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 62 | 1 | 1 | 1 | 12 | 1 | 5 | 100 |
| 63 | 1 | 1 | 1 | 1 | 0 | 4 | 80 |
| 64 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 65 | 1 | 0 | 0 | 1 | 1 | 3 | 60 |
| 66 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 67 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 68 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 69 | 1 | 0 | 1 | 0 | 1 | 3 | 60 |
| 70 | 1 | 1 | 0 | 1 | 1 | 4 | 80 |
| 71 | 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 72 | 1 | 1 | 11 | 1 | 1 | 5 | 100 |
| 73 | 0 | 0 | 0 | 1 | 0 | 1 | 20 |
| Total | 52 | 33 | 40 | 37 | - 47 | 209 | 4180 |
|  | 0,71232 | 0,45205 | 0,54794 | 0,50684 | 0,64383 | 2,86301 | 34,2465 |
| Mean | 9 | 5 | 5 | 9 | 6 | 4 | 8 |


| 2 | 7 | 12 | 17 | 22 | Total | Value |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 0 | 1 | 0 | 0 | 2 | 40 |
| 0 | 0 | 1 | 1 | 1 | 3 | 60 |
| 0 | 0 | 1 | 0 | 0 | 1 | 20 |
| 1 | 1 | 0 | 0 | 0 | 2 | 40 |


| 0 | 0 | 0 | 1 | 0 | 1 | 20 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 1 | 1 | 1 | 0 | 1 | 4 | 80 |
| 0 | 1 | 0 | 1 | 0 | 2 | 40 |
| 1 | 1 | 1 | 1 | 0 | 4 | 80 |
| 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 0 | 1 | 0 | 0 | 1 | 2 | 40 |
| 1 | 0 | 0 | 1 | 0 | 2 | 40 |
| 0 | 0 | 0 | 1 | 1 | 2 | 40 |
| 1 | 0 | 0 | 0 | 0 | 1 | 20 |
| 0 | 0 | 0 | 1 | 1 | 2 | 40 |
| 1 | 0 | 0 | 0 | 0 | 1 | 20 |
| 0 | 1 | 1 | 0 | 0 | 2 | 40 |
| 1 | 1 | 1 | 1 | 0 | 4 | 80 |
| 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 0 | 0 | 0 | 1 | 1 | 2 | 40 |
| 0 | 1 | 0 | 0 | 0 | 1 | 20 |
| 1 | 1 | 0 | 0 | 1 | 3 | 60 |
| 1 | - 1 | 0 | 0 | 1 | 3 | 60 |
| 0 | 1 | 1 | 0 | 1 | 3 | 60 |
| 1 | $-1$ | 0 | 0 | 1 | 3 | 60 |
| 0 | 0 | 1 | 0 | 1 | 2 | 40 |
| 1 | 0 | 0 | 0 | 0 | 1 | 20 |
| 0 | 1 | 1 | 0 | 1 | 3 | 60 |
| 0 | 0 | 0 | 1 | 0 | 1 | 20 |
| 0 | 1 | 0 | 0 | 0 | 1 | 20 |
| 0 | 0 | 1 | 1 | 1 | 3 | 60 |
| 1 | 0 | 1 | 0 | 0 | 2 | 40 |
| 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 1 | 0 | 0 | 1 | 0 | 2 | 40 |
| 0 | 0 | 1 | 0 | 1 | 2 | 40 |
| 0 | 0 | 1 | 0 | 0 | 1 | 20 |
| 1 | 0 | 1 | 1 | 0 | 3 | 60 |
| 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 0 | 0 | 0 | 1 | 1 | 2 | 40 |
| 0 | 0 | 1 | 0 | 0 | 1 | 20 |
| 1 | 0 | 1 | 0 | 1 | 3 | 60 |
| 1 | 0 | 0 | 1 | 0 | 2 | 40 |
| 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 0 | 0 | 1 | 0 | 0 | 1 | 20 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 0 | 0 | 1 | 0 | 0 | 1 | 20 |


| 1 | 0 | 1 | 0 | 0 | 2 | 40 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0 | 1 | 1 | 1 | 3 | 60 |
| 0 | 0 | 1 | 1 | 1 | 3 | 60 |
| 0 | 0 | 1 | 0 | 0 | 1 | 20 |
| 1 | 1 | 0 | 0 | 1 | 3 | 60 |
| 1 | 0 | 1 | 1 | 0 | 3 | 60 |
| 0 | 1 | 1 | 0 | 1 | 3 | 60 |
| 1 | 1 | 0 | 0 | 1 | 3 | 60 |
| 0 | 0 | 1 | 1 | 0 | 2 | 40 |
| 0 | 0 | 1 | 0 | 0 | 1 | 20 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 1 | 1 | 1 | 1 | 0 | 4 | 80 |
| 0 | 1 | 0 | 0 | 1 | 2 | 40 |
| 1 | 0 | 1 | 0 | 10 | 2 | 40 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 0 | 0 | 1 | 0 | 2 | 40 |
| 1 | 1 | 1 | 1 | 12 | 4 | 80 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 1 | - 1 | 0 | 1 | 1 | 4 | 80 |
| 0 | 0 | 1 | 1 | 1 | 3 | 60 |
| 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 0 | 1 | 1 | 4 | 80 |
| 0 | 1 | 1 | 1 | 0 | 3 | 60 |
| 41 | 35 | 38 | 32 | 34 | 180 | 3600 |
| 0,561644 | 0,479452 | 0,520548 | 0,438356 | 0,465753 | 2,465753 | 17,80822 |


| 3 | 8 | 13 | 18 | 23 | Total | Value |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 0 | 0 | 1 | 0 | 2 | 40 |
| 1 | 0 | 0 | 1 | 0 | 2 | 40 |
| 1 | 0 | 0 | 0 | 0 | 1 | 20 |
| 0 | 1 | 1 | 0 | 0 | 2 | 40 |
| 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 1 | 0 | 0 | 0 | 0 | 1 | 20 |
| 1 | 1 | 1 | 0 | 1 | 4 | 80 |
| 1 | 0 | 1 | 1 | 0 | 3 | 60 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 0 | 0 | 0 | 1 | 0 | 1 | 20 |
| 1 | 1 | 0 | 0 | 1 | 3 | 60 |
| 1 | 1 | 0 | 1 | 1 | 4 | 80 |


| 0 | 1 | 1 | 1 | 0 | 3 | 60 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 0 | 0 | 1 | 3 | 60 |
| 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 0 | 1 | 1 | 0 | 1 | 3 | 60 |
| 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 1 | 1 | 0 | 1 | 1 | 4 | 80 |
| 1 | 0 | 1 | 0 | 1 | 3 | 60 |
| 0 | 0 | 0 | 1 | 1 | 2 | 40 |
| 0 | 1 | 0 | 0 | 0 | 1 | 20 |
| 1 | 0 | 0 | 0 | 0 | 1 | 20 |
| 1 | 0 | 0 | 1 | 1 | 3 | 60 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 1 | 0 | 1 | 0 | 1 | 3 | 60 |
| 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 0 | 0 | 1 | 0 | 1 | 2 | 40 |
| 1 | 0 | 0 | 1 | 0 | 2 | 40 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 | 1 | 3 | 60 |
| 1 | 0 | 1 | 0 | 0 | 2 | 40 |
| 0 | 0 | 0 | 0 | 1 | 1 | 20 |
| 1 | 0 | 0 | 1 | 0 | 2 | 40 |
| 0 | 0 | 1 | 0 | 1 | 2 | 40 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 1 | 0 | 0 | 1 | 1 | 3 | 60 |
| 1 | 1 | 1 | 0 | 1 | 4 | 80 |
| 1 | 1 | 1 | 0 | 0 | 3 | 60 |
| 0 | 1 | 1 | 1 | 0 | 3 | 60 |
| 1 | 0 | 1 | 0 | 1 | 3 | 60 |
| 1 | 1 | 0 | 1 | 0 | 3 | 60 |
| 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 0 | 0 | 1 | 0 | 1 | 2 | 40 |
| 1 | 1 | 1 | 0 | 1 | 4 | 80 |
| 1 | 1 | 1 | 0 | 0 | 3 | 60 |
| 1 | 0 | 1 | 0 | 0 | 2 | 40 |
| 1 | 1 | 1 | 0 | 0 | 3 | 60 |
| 0 | 0 | 1 | 1 | 1 | 3 | 60 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 1 | 20 |
| 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 0 | 1 | 1 | 0 | 0 | 2 | 40 |
| 1 | 1 | 1 | 1 | 0 | 4 | 80 |


| 1 | 1 | 0 | 1 | 1 | 4 | 80 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0 | 1 | 1 | 0 | 2 | 40 |
| 1 | 0 | 0 | 0 | 0 | 1 | 20 |
| 0 | 1 | 1 | 1 | 0 | 3 | 60 |
| 1 | 1 | 0 | 0 | 0 | 2 | 40 |
| 0 | 1 | 0 | 1 | 1 | 3 | 60 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 0 | 0 | 1 | 1 | 1 | 3 | 60 |
| 1 | 0 | 0 | 0 | 1 | 2 | 40 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 0 | 1 | 1 | 0 | 3 | 60 |
| 1 | 1 | 1 | 0 | 0 | 3 | 60 |
| 0 | 1 | 0 | 0 | 0 | 1 | 20 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 0 | 0 | 3 | 60 |
| 0 | 0 | 0 | 1 | 1 | 2 | 40 |
| 0 | 0 | 0 | 1 | 1 | 2 | 40 |
| 48 | 33 | 36 | 32 | 37 | 186 | 3720 |
| 0,657534 | 0,452055 | 0,493151 | 0,438356 | 0,506849 | 2,547945 | 19,17808 |


| 4 | 9 | 14 | 19 | 24 | Total | Value |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 1 | 0 | 0 | 1 | 3 | 60 |
| 1 | 1 | 0 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 0 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 0 | 0 | 3 | 60 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |


| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 0 | 1 | 1 | 4 | 80 |
| 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |


| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 0 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 0 | 4 | 80 |
| 1 | 1 | 0 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 65 | 68 | 65 | 69 | 69 | 336 | 6720 |
| 0,890411 | 0,931507 | 0,890411 | 0,945205 | 0,945205 | 4,60274 | 94,52055 |


| 5 | 10 | 15 | 20 | 25 | Total | Value |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 1 | 0 | 1 | 0 | 2 | 40 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 0 | 0 | 1 | 0 | 1 | 2 | 40 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
|  | 1 | 1 | 1 | 1 |  |  |


| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 0 | 1 | 1 | 1 | 0 | 3 | 60 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 0 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 0 | 1 | 4 | 80 |
| 0 | 0 | 1 | 1 | 1 | 3 | 60 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 0 | - 1 | 1 | 1 | 0 | 3 | 60 |
| 1 | -1 | 1 | 1 | 1 | 5 | 100 |
| 1 | -1 | 0 | 1 | 1 | 4 | 80 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 0 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 0 | 1 | 1 | 0 | 1 | 3 | 60 |
| 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 0 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 0 | 1 | 1 | 0 | 3 | 60 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 0 | $\cdots 1$ | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 0 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 0 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 0 | 1 | 1 | 1 | 4 | 80 |
| 1 | 1 | 1 | 1 | 1 | 5 | 100 |
| 1 | 0 | 1 | 1 | 1 | 4 | 80 |


| 0 | 1 | 1 | 1 | 1 | 4 | 80 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 1 | 1 | 0 | 1 | 1 | 4 | 80 |
| 59 | 65 | 69 | 65 | 69 | 327 | 6540 |
| 0,808219 | 0,890411 | 0,945205 | 0,890411 | 0,945205 | 4,479452 | 90,41096 |


| Total | Raw Score | Value |
| :---: | :---: | :---: |
| 9 | 0,36 | 36 |
| 16 | 0,64 | 64 |
| 12 | 0,48 | 48 |
| 15 | 0,6 | 60 |
| 14 | 0,56 | 56 |
| 11 | 0,44 | 44 |
| 23 | 0,92 | 92 |
| 16 | 0,64 | 64 |
| 22 | 0,88 | 88 |
| 14 | 0,56 | 56 |
| 17 | 0,68 | 68 |
| 16 | 0,64 | 64 |
| 19 | 0,76 | 76 |
| 17 | 0,68 | 68 |
| 18 | 0,72 | 72 |
| 17 | 0,68 | 68 |
| 16 | 0,64 | 64 |
| 23 | 0,92 | 92 |
| 17 | 0,68 | 68 |
| 16 | 0,64 | 64 |
| 14 | 0,56 | 56 |
| 16 | 0,64 | 64 |
| 18 | 0,72 | 72 |
| 23 | 0,92 | 92 |
| 17 | 0,68 | 68 |
| 17 | 0,68 | 68 |
| 14 | 0,56 | 56 |
| 17 | 0,68 | 68 |
| 13 | 0,52 | 52 |
| 12 | 0,48 | 48 |
| 17 | 0,68 | 68 |
| 16 | 0,64 | 64 |
| 13 | 0,52 | 52 |
| 15 | 0,6 | 60 |
| 15 | 0,6 | 60 |
| 10 | 0,4 | 40 |


| 21 | 0,84 | 84 |
| :---: | :---: | :---: |
| 18 | 0,72 | 72 |
| 20 | 0,8 | 80 |
| 19 | 0,76 | 76 |
| 16 | 0,64 | 64 |
| 18 | 0,72 | 72 |
| 13 | 0,52 | 52 |
| 16 | 0,64 | 64 |
| 14 | 0,56 | 56 |
| 23 | 0,92 | 92 |
| 13 | 0,52 | 52 |
| 15 | 0,6 | 60 |
| 18 | 0,72 | 72 |
| 18 | 0,72 | 72 |
| 10 | 0,4 | 40 |
| 16 | 0,64 | 64 |
| 22 | 0,88 | 88 |
| 15 | 0,6 | 60 |
| 21 | 0,84 | 84 |
| 18 | 0,72 | 72 |
| 16 | 0,64 | 64 |
| 18 | 0,72 | 72 |
| 15 | 0,6 | 60 |
| 20 | 0,8 | 80 |
| 17 | 0,68 | 68 |
| 20 | 0,8 | 80 |
| 19 | 0,76 | 76 |
| 20 | 0,8 | 80 |
| 18 | 0,72 | 72 |
| 22 | 0,88 | 88 |
| 20 | 0,8 | 80 |
| 21 | 0,84 | 84 |
| 14 | 0,56 | 56 |
| 23 | 0,92 | 92 |
| 22 | 0,88 | 88 |
| 19 | 0,76 | 76 |
| 15 | 0,6 | 60 |
| 1238 | 49,52 |  |
| 0,678356 | 0,67835616 |  |

