

## **CHAPTER V**

### **CONCLUSIONS AND SUGGESTIONS**

#### **5.1 Conclusions**

Based on the research that has been conducted on a web-based three tier multiple choice diagnostic test to analyze misconceptions on redox material in class XII MIA at SMA N 2 Percut Sei Tuan, it is concluded as follows:

1. Students of SMA N 2 Percut Sei Tuan experience misconceptions in redox material. The misconception that occurs is 31,718%, while students who experience incomprehension of the concept is 54,687%, students who understand the concept is 13,906% and understand the concept is not sure 1.25%.
2. The percentage of student misconceptions in each concept of redox material is on the concept of name of compounds by 43.8%, on the concept of autoredox reaction by 37.5%, on the concept of reduction and oxidation reactions based on the increase and decrease in oxidation number by 33.02%; on the concept of determination of reductant and oxidizer by 32.05%; on the concept of oxidation-reduction reactions based on the binding and release of oxygen and electrons by 29.67%; on the concept of redox reaction by 28.1% and on the concept of equalization of redox reactions by oxidation number method and  $\frac{1}{2}$  reaction / ion electron method by 26.6%.
3. The causes of student misconceptions were found in each causal factor with the highest factor that caused students to experience misconceptions was the teacher factor with a percentage of 21.32%, the teaching method factor of 21.28%, the student factor of 20.43%; the book factor of 20.27%; and the context factor of 16.68%.

#### **5.2 Suggestions**

Based on the research that has been completed, the researcher makes the following suggestions:

1. Teachers really have to reinforce the origin of the material taught before students get the next more complicated material to prevent misconceptions.
2. It is necessary to conduct a diagnostic test using a three tier multiple choice diagnostic test instrument that has been tested for item feasibility to identify misconceptions in students in function material.
3. It is expected that the three tier multiple choice diagnostic test can be used and expanded or developed for different materials.
4. It is expected that further analysts can conduct further research by expanding the material and the number of samples.