

## **CHAPTER V**

### **CONCLUSIONS**

Kenaf fiber-reinforced PBZX composites were successfully made through a RTM process. The mechanical properties of PBZX resin depend on the ratio of BA-a:Ph-a, curing temperature, and curing time. An increase in BA-a:Ph-a ratio led to an increase in flexural strength, flexural modulus, and slight increase in impact strength while flexural modulus was found to decrease for PBZX resin at lower curing conditions of 150°C for 3 h + 160°C for 3 h. Flexural properties and impact strength of the pure PBZX resin were found to increase with the curing time and temperature. Comparison of PBZX resins of different BA-a:Ph-a ratios with UPE resin shows that the flexural strength and flexural modulus of PBZX resin of BA-a:Ph-a ratio of 60:40 and 80:20 were superior to UPE resin, whereas their impact strength was about the same. Moreover, PBZX resin was found to have a lower water absorption compared to UPE resin. Comparison of the properties of composites from both resins shows that flexural strength and impact strength of PBZX composite were less than UPE composite but its flexural modulus was much higher.