

## **MA-437: DECOMPOSITION OF MODULES**

Rings and modules, decomposition of modules, decomposition theorem, the primary decomposition theorem, The primary decomposition, Abelian groups as  $\mathbb{Z}$ -modules, Abelian groups, Sylow's theorem, linear transformation and matrices, invariants and the Jordan canonical form, the rational canonical form theorem - (linear transformation version), The Jordan canonical form theorem, conjugacy classes in general linear groups.

### **RECOMMENDED BOOKS:**

1. Blyth, T., Module theory, O.U.P., Oxford, 1977.
2. Hartley, B. and Hawkes, T., Rings, modules and linear algebra, Chapman, G., Lecture Notes on Modules, Michigan University Press.