

Subject: Advanced Mathematical Physics II

(Date: 25/03/20)

Part 2: Group Theory

Instructor: Ajay Mishra

Course: BSc. Physics (Hons) 6 sem

Topics Covered:

- Different types of Groups and their properties.

Topics to be Covered:

- Representation of Groups
- $SO(2)$, $SO(3)$, $O(2)$, $SU(2)$, $SU(3)$ Groups.

Suggested References for the above topics

1. Short notes on $SO(2)$ (Special Orthogonal), $SO(3)$, $SU(2)$ (Special Unitary) and $SU(3)$ to be uploaded on e-resource content of college website.
2. Representation of Groups from Chapter 3 of Group theory for Physicist : A.W Joshi
3. Chapter 2 of Group Theory and Its Application to Physical Problems: Morton Hamermesh
4. $SO(2)$, $SO(3)$, $O(2)$, $SU(2)$, $SU(3)$ Groups from Chapter 4 of Group theory for Physicist : A.W Joshi

A tutorial (#5) is attached herewith. All are requested to kindly submit the solution of the assignment in a .pdf document on the AMP-2 WhatsApp group made for the discussion of all the aforementioned topics positively by 28.03.2020.