

CSN -106 : Discrete Structures
(Autumn Semester 2022-23)
Tutorial

Question 1. Check whether $(\mathbb{Z}, .)$ will form a group? Give explanation.

Question 2. A cyclic group is a group that can be generated by a single element X (the group generator).
Prove that $(\mathbb{Z}_7, +)$ is cyclic group.

Question 3. Check whether $(\mathbb{R} - \{1, -1\}, *)$ will form a group where $* = a+b+ab$.

Question 4. Show that $(\mathbb{Z}_7, +, .)$ will form a ring.

Question 5. Find the order of all the elements in \mathbb{Z}_{10} .

Question 6. Give an example of a non-commutative group.

Question 7. Find generator/s for $(\mathbb{Z}, +)$.