## NTSE 2021-22 PRACTICE SHEET TOPIC-MOLE CONCEPT NUMERICALS PREPARED BY- POOJA NARULA NTSE RP LUDHIANA

## QUESTIONS The mole concept allows to count atoms!

## ANSWERS

- 1. Calculate the mass of 12.044 × 10<sup>23</sup> carbon atoms.
- 2. Calculate the number of molecules in 11.2 liters of SO<sub>2</sub> gas at NTP.
- 3. Calculate the number of oxygen atoms in 1 mole of  $O_2$ .
- 4. What is the volume occupied by 6.022×10<sup>23</sup>molecules of any gas at NTP?
- 5. Calculate the number of atoms in 100 u of He.
- 6. Calculate the number of Cu atoms in 0.635g of Cu.

3.011×10<sup>23</sup> molecules.

25 atoms.

12.044 ×10<sup>23</sup> atoms.

22.4 L at NTP.

6.022 × 1021 atoms.

24 g.

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