



**Computer Science | Mr. Anurag Kumar**

- Complete all the exercises of chapter XI.

**ENGLISH | Mr. C.K. Jha**

1. Chapter : Voice

Source : Grammar (Wren & Martin)

Do all the tasks given under exercises 39, 40, 41 & 42.

**ENGLISH | Mrs. Rita Mishra**

1. The host child Question No. 1, 2, and 5.
2. The Adventure of Toto Question No. 1, 2, 3 & 4.

**Math | Mr. S. J.**

NCERT Exercise -10.5(Q. no 1 to 12)

**Math | Mr. T.B. K.**

R.S. Agrawal –Exercise – 18 A, 18 B, 18 C

**Chemistry | Mr. Lalan Kumar**

**Higher Order Thinking Skills (HOTS) Questions**

1. Calcium chloride when dissolved in water dissociates into its ions according to the following equation:  $CaCl_2(aq) \rightarrow Ca^{2+}(aq) + 2Cl^{-}(aq)$  Calculate the number of ions obtained from  $CaCl_2$  when 222 g of it is dissolved in water.
2. The difference in the mass of 100 moles each of sodium atoms and sodium ions is 5.48002 g. Compute the mass of an electron.
3. Cinnabar (HgS) is a prominent ore of mercury. How many grams of mercury is present in 225 g of pure HgS ? Molar mass of Hg and S are  $200.6 \text{ g mol}^{-1}$  and  $32 \text{ g mol}^{-1}$  respectively.

4. The mass of one steel screw is 4.11 g. Find the mass of one mole of these steel screws. Compare this value with the mass of the earth ( $5.98 \times 10^{24}$  kg). Which one of the two is heavier and by how many times ?
5. Compute the difference in masses of  $10^3$  moles each of magnesium atoms and magnesium ions. (Mass of an electron =  $9.1 \times 10^{-31}$  kg)
6. Which has more number of atoms ? (i) 100 g of  $N_2$  or (ii) 100 g of  $NH_3$
7. Compute the number of ions present in 5.85 g of sodium chloride.
8. A gold sample contains 90% of gold and the rest copper. How many atoms of gold are present in one gram of this sample of gold ?
9. What are ionic and molecular compounds ? Give examples.
10. Compute the difference in masses of one mole each of aluminium atoms and one mole of its ions. (Mass of an electron is  $9.1 \times 10^{-28}$  g). Which one is heavier ?
11. A silver ornament of mass 'm' gram is polished with gold equivalent to 1 % of the mass of silver. Compute the ratio of the number of atoms of gold and silver in the ornament.
12. A sample of ethane ( $C_2H_6$ ) gas has the same mass as  $1.5 \times 10^{20}$  molecules of methane ( $CH_4$ ). How many  $C_2H_6$  molecules does the sample of gas contain ?
13. (a) Calculate the number of molecules of  $SO_2$  present in 44 g of it.  
(b) If one mole of oxygen atoms weighs 16 grams, find the mass of one atom of oxygen in (grams).
14. Sodium is represented as  $Na_{11}^{23}$   
(a) What is its atomic mass ?  
(b) Write its gram atomic mass.  
(c) How many atoms of Na will be there in 11.5 g of the sample ?

### Reasoning Questions

1. (a) Why does not atomic mass of an element represent the actual mass of its atom ?  
(b) "The atomic mass of an element is in fraction." What does it mean ?
2. Explain why the number of atoms in one mole of hydrogen gas is double the number of atoms in one mole of Helium gas ?
3. Why atoms form ions ?  
(Do all answers in a separate new copy)

### Physics | Mr. BK

1. Explain -
  - (I) Solar Energy
  - (II) Wind Energy
  - (III) Tidal Energy
  - (IV) Hydro Energy

2. Derive the expression for work done using a force at an angle  $\theta$  with horizontal on a body.
3. (I) What is buoyant force?  
(II) Write the Archimede's principal.
4. (i) What is sound? (ii) Name two type of sound and explain them.

### Biology | Mr. Sudip Chakraborty

1. Discuss on two extinct animals with their cause of extinction consulting IUCN

### हिंदी | डॉ. आलोक पांडेय, चंद्रकांत "नागमणि"

1. निम्न विषय पर निबंध लिखिए -
  - ❖ आतंकवाद एक समस्या
  - ❖ नैतिक पतन देश का पतन
2. बिहार के पांच प्रमुख साहित्यकारों का जीवन परिचय लिखकर लाइए?
3. 'दिनकर', 'नेपाली', आरसी प्रसाद सिंह की पांच - पांच चर्चित कविताओं को लिखकर लाइए।

### संस्कृत | श्री गोपाल झा

शेमुषी भाग - 1

4. अभ्यास संख्या 9 एवं 10 में दिये गए सभी प्रश्नों के उत्तर लिखकर याद करें ।
5. पाठ्यक्रम में दिये गए सभी शब्दरूपों एवं धतुरूपों की पुनरावृत्ति करके आवें ।