

SATISH CHANDRA MEMORIAL SCHOOL

CLASS: VII

CLASS TEST

TOPIC: INTEGERS

DATE: 26-04-2024

F.M.: 15

Time: 35 minutes

A. Choose the correct answer: [$1 \times 5 = 5$]

1	For a non-zero integer 'q' which of the following is not defined?			
	a) $q \div 0$	b) $0 \div q$	c) $q \div 1$	d) $1 \div q$
2	$(-10) \times (-7) + (-5)$ is equal to			
	a) 120	b) (-75)	c) 65	d) (-120)
3	Starting with (-13) if Ranit add (-14) with it and divide the sum with additive inverse of $\{(-72) \div 8\}$, then the quotient he will get is			
	a) 3	b) -3	c) $\frac{-1}{3}$	d) $\frac{1}{3}$
4	Aishani multiplied two integers and got (-8) as product. She then subtracted the first integers from the second and got (+6). The two numbers are			
	a) 2, (-4)	b) (-2), 4	c) (-8), 1	d) (-1), 8
5	$(-25) \times 12 + (-25) \times (-7) = ?$			
	a) (-475)	b) (-125)	c) 125	d) 475

B. Short Answer Type questions: [6]

1. The highest point measured above sea level is the summit of Mt. Everest which is 8,848m above sea level and the lowest point is challenger deep at the bottom of Mariana Trench which is 1091m below sea level. What is the vertical distance between these two points? [2]

2. Simplify: $63 - (-3)\{-2 - (8 - 3)\} \div 3\{5 + (-2) \times (-1)\}$ [2]

3. The temperature of a certain place at 8 p.m. in the morning is 12°C above zero. It ascends at the rate of 5 degree Celsius per hour till 2 p.m. Then it starts to fall at a rate of 3 degree Celsius per hour till midnight. From midnight to 6 a.m. in the morning, there is no change in temperature. Find the temperature of the place at 2 a.m. [2]

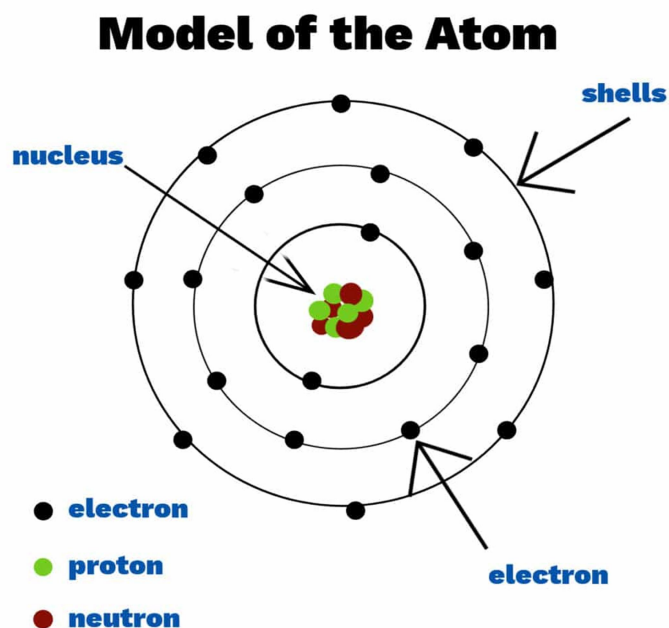
3. CASE STUDY:

ATOMIC STRUCTURE

Atom is the smallest particle of a matter that exhibits all the properties of the matter.

There are three fundamental particles in an atom: **Electron**, **Proton** and **Neutron**.

Proton and Neutron lies together at the Centre of the atom, known as **nucleus** and the electrons rotate around it through different orbits or shells. The atomic structure is similar to our Solar system and often known as **Solar System model** of an atom.



- Electrons are negatively charged particles. Each electron has a charge of **(-1)**.
- Protons are positively charged particles. Each proton has a charge of **(+1)**.
- Neutrons are neutral. They don't have any charge.
- Number of electrons in an atom = Number of protons in that atom
- **Nucleons = Total no. of Protons + Total no. of Neutrons in an atom**
- Generally atoms are neutral in charge as the no. of protons and electrons are same in an atom.
- An atom can be a charged particle (positively charged or negatively charged) if it loses or gains electron.

1. In an atom of aluminium (Al) there are 11 protons and 23 nucleons, find the total charge of nucleus of an atom. [1]

2. What will be the number of electrons in an aluminium atom? [1]

3. What will be the total negative charge if the aluminium atom loses three electrons? [1]

4. In an atom of Chlorine (Cl), total number of nucleons is 35 and no. of neutrons is 18. What will be the net charge of Chlorine atom if it gains one more electron? [1]