TENDER HEART HIGH SCHOOL, SEC-33B, CHD

15.4.24

CLASS- VIII SUBJECT- CHEMISTRY

CHAPTER- 8 TEACHER- MOHINISHA THAKUR

ATMOSPHERIC POLLUTION
EXCERCISE - 8(A)

Ans2°- (i) Sulphur dioxide (ii) Hydrogen sulphide (iii) Fluorides (iv) Nitrogen oxides.

Ans3°- Refers to text on page no-130 of your book.

Ans4°- Natural sources of air pollution:- Wildfire, volcanic eruptions, earthquakes etc.
Man-made sources of air pollution:- Thermal power plants, Sewage disposal, Overpopulation, Deforestation, etc.

Ans5°- Refers to the text on page no 129 & 130

Ans6°- Pollutant which is combination of oxides of Nitrogen and Sulphur and partially of hydrocarbons produced by industries and automobiles. This forms a dark, thick soot laden fog known as smog.
Impact of smog:-

1. Smog is noxious and irritating
2. Smog reduces visibility
3. Smog causes respiratory problems
4. Smog can cause suffocation and death.

(End)

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CLASS- VIII SUBJECT- CHEMISTRY

CHAPTER- 4 TEACHER- MOHINISHA THAKUR

Atomic Structure and Chemical Bonding

ANSWER KEY
Exercise - 4(B)

Ans1. The three fundamental particles of an atom -

	Particle	Symbol	Charge
(i)	Electron	e^-	-1
(ii)	Proton	p^+	+1
(iii)	Neutron	n	0

Ans2.

Element	Symbol	No. of Protons	No. of Neutrons	No. of electrons
Sodium	$^{23}_{11}Na$	11	12	11
Chlorine	$^{35}_{17}Cl$	17	18	17
Uranium	$^{238}_{92}U$	92	146	92
S	$^{19}_{9}F$	9	10	9

Ans3. Atomic number = 4
Mass number = 4 + 5 = 9

Ans4. Atomic number = 11 and Mass number = 23
Number of protons = 11
Number of electrons = Number of protons
Therefore, Number of electrons = 11
Number of neutrons = 23 - 11 = 12

Ans5. p = proton, n = neutron, e = electron
Superscript numbers: These superscript number show their mass number.

(P.T.O)

CLASS - VIII SUBJECT - CHEMISTRY

CHAPTER - 4 TEACHER - MOHINISHA THAKUR

Subscript number :- These numbers show their atomic number.

Ans6 :- Atomic number = 12
Mass number = 24
Electronic configuration = 2, 8, 2

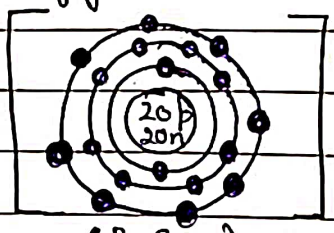
Ans7 :- Atomic number = 16
Atomic mass = 32
Number of protons = 16
Number of electrons = 16
Number of neutrons = 32 - 16 = 16
Electronic configuration = 2, 8, 6

Ans8 :- (i) The maximum capacity of a shell to accommodate electrons is given by the general formula $2n^2$, where n is the serial number of a shell.

(ii) The maximum number of electrons possible in the outermost shell is 8, and penultimate shell is 18.

(iii) It is not necessary for an orbit to become complete before another is formed. In fact, a new orbit is formed when the outermost shell attains 8 electrons.

Ans9 :- Orbital diagram of $^{40}_{20}Ca^{2+}$, Atomic number of Ca^{2+} is 18
Electronic configuration of Ca^{2+} is 2, 8, 8.



(2, 8, 8)

Ca - ion

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CHAPTER- 4 TEACHER-MOHINISHA THAKUR

Number of three fundamental particles of Ca^{2+}:

Protons : 18

Electrons : 18

Neutrons : 40 - 18 = 22

Ans 10 (a) $^{27}_{13}X$ Atomic number = 13

Therefore number of electrons = 13

Electronic configuration = 2, 8, 3

(b) $^{35}_{17}Y$ Atomic number = 17

Number of electrons = 17

Number of protons = 17

Number of neutrons = 35 - 17 = 18

Electronic configuration = 2, 8, 7

(End)