



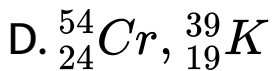
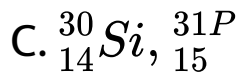
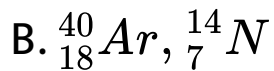
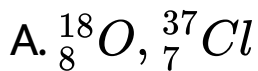
CHEMISTRY

BOOKS - FULL MARKS CHEMISTRY (TAMIL ENGLISH)

ATOMIC STRUCTURE

Exercise I Choice The Correct Answer

1. Among the following the odd pair is ...



Answer: B



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2. Change in the number of neutrons in an atom changes it to

A. an ion

B. an isotope

C. an isobar

D. another element

Answer: B



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3. The term nucleons refer to

A. Protons and electrons

B. Only Neutrons

C. Electrons and neutrons

D. Protons and neutrons

Answer: D



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4. The number of protons, neutrons and electrons present respectively in ${}_{35}^{80}\text{Br}$

A. 80, 80, 35

B. 35 , 55 , 80

C. 35 , 35 , 80

D. 35 , 45 , 35

Answer: D



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5. The correct electronic configuration of potassium is

A. 2, 8, 9

B. 2, 8, 1

C. 2, 8, 8, 1

D. 2, 8, 8, 3

Answer: C



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Exercise II True Of False If False Give The Correct Answer

1. In an atom, electrons revolve around the nucleus in fixed orbits.



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2. Isotopes of an element have the different atomic numbers.



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3. Electrons have negligible mass and charge .



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4. Smaller the size of the orbit, lower is the energy of the orbit .



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5. The maximum number of electrons in L shell is 10 .



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Exercise Iii Fill In The Blanks

1. Calcium and Argon are example of a pair of
..... .



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2. Total Number of electrons that can be
accommodated in an orbit is given by

.



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3. Isotope is used in the nuclear reactors .



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4. The number of neutrons present in ${}^7_3\text{Li}$ is

.....



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Exercise Iv Match The Following

1.
 1. Dalton (a) Hydrogen atom model
 2. Thomson (b) Planetary model
 3. Rutherford (c) First atomic theory
 4. Neils Bohr (d) Plum pudding model
(e) Discovery of neutrons



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Exercise V Complete The Following Table

Atomic number	Mass number	Numbers of Neutrons	Numbers of Protons	Number of Electrons	Name of the Element
9	-	10	-	-	-
16	-	16	-	-	-
-	24	-	-	12	Magnesium
-	2	-	1	-	-
1	1	0	1	1	-

1.



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Exercise VI Answer Very Briefly

1. Name an element which has the same number of electrons in its first and second shell.



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2. Write the electronic configuration of K and Cl



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3. Compare the charge and mass of protons and electrons .



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4. For an atom 'X', K, L and M shells are completely filled . How many electrons will be present in it ?



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5. Ca^{2+} has completely filled outer shell .
Justify your answer.



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1. State the law of multiple proportion.

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2. List the uses of isotopes .

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3. What is Isotone ? Give an example .

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4. Draw the structure of oxygen and sulphur atoms .



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5. 5, Calculate the number of neutrons, protons and electrons

(i) atomic number 3 and mass number 7

(ii) atomic number 92 and mass number 238



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Exercise Viii Long Answer

1. What conclusion were made from the observations of Gold foil experiment?



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2. Explain the postulates of Bohr's atomic model.



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3. State the Gay Lussac's law of combining volumes, explain with an illustration.



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In Text Problems

1. Calculate the atomic number of an element whose mass number is 39 and number of neutrons is 20 . Also find the name of the element.



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2. What is the 3electronic configuration of Aluminium ?



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3. Find the valency of Magnesium and Sulphur

.



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Activity

1. Symbolically represent the following atoms using atomic number and mass number .

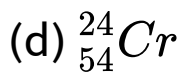
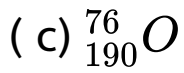
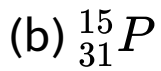
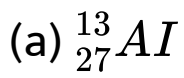
(a) Carbon (b) Oxygen (c) Silicon (d) Beryllium



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Test Yourself

1. Calculate the number of neutrons in the following atoms :



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