

1. SYMBOLS AND RULES

SOLUTIONS

TEACHING TASK

1. Symbol is usually derived from the name of the element, often in
A)French B)Italian C)German D)Latin

Answer:D

Solution:Many chemical symbols come from the element's Latin name (e.g., Au for Aurum (Gold), Fe for Ferrum (Iron)).

2. Beryllium is said to have a sweet taste. The symbol for beryllium is
A)B B)Be C)Br D) Ys

Answer:B

Solution:Beryllium's symbol is Be, derived directly from its name.

3. Calcium is found in your bones and teeth. The symbol for calcium is
A)C B)Ca C)Cl D)Cm

Answer:B

Solution:Calcium's symbol is Ca, from its Latin name Calcium.

4. Zn is the chemical symbol for.....

A)Zinc B)nothing it isn't a chemical symbolC)Helium D)Xenon

Answer:A

Solution:Zn is the symbol for Zinc (from German Zink).

5. Cl is the chemical symbol for...

A)Chlorine B)Carbon C)Copper D)Silicon

Answer:A

Solution:Cl stands for Chlorine (from Greek Chloros, meaning greenish-yellow).

6. Symbol 'Al' stands for:

A) Alumina B)Aluminium C)Alumnium D)Alumina

Answer:B

Solution:Al is the symbol for Aluminium (from Latin Alumen).

7. The atomic number of Zirconium is

A) 21 B)18 C)39 D)40

Answer:D

Solution:Zirconium (Zr) has an atomic number of 40.

8. Which of the following is correct?

A)Rubidium-Rb B)Bromine-B C)Silver-S D)Tin-Ti

Answer:A

Solution:Rubidium-Rb (Correct).

Bromine is Br, Silver is Ag, Tin is Sn.

9. Which of the following is correct?

A)Platinum-Pt B)Copper-C C)Cobalt-CO D)Zinc-Z

Answer:A

Solution:Platinum-Pt (Correct).

Copper is Cu, Cobalt is Co, Zinc is Zn.

10. Ge stands for
A)Gold B)Germanium C)Argon D)Gallium

Answer:B

Solution:Ge is the symbol for Germanium (named after Germany).

MULTIPLE CORRECT ANSWER TYPE

11. Which of the following symbols are correct?

A)SE B)Cl C)Cu D)NA

Answer:B,C

Solution:B) Cl: Correct symbol for Chlorine.

C) Cu: Correct symbol for Copper (from Latin Cuprum).

A) SE: Incorrect. The symbol for Selenium is Se (not SE).

D) NA: Incorrect. The symbol for Sodium is Na (from Latin Natrium).

12. The atomic number and symbol of Arsenic is

A)A B)33 C)32 D)As

Answer:B,D

Solution:Atomic number of Arsenic: 33.

Symbol of Arsenic: As.

STATEMENT TYPE

13. Statement - I : Short hand representation of an element is symbol.

Statement -II: Symbol has both qualitative and quantitative significance.

Answer:A

Solution:Statement-I is True:

Chemical symbols (e.g., H for Hydrogen, O for Oxygen) are indeed the shorthand representations of elements.

Statement-II is True:

Qualitative significance: The symbol identifies the element (e.g., "Na" for Sodium).

Quantitative significance: The symbol represents one atom of the element in chemical equations (e.g., "2Na" means two sodium atoms).

14. Statement -I: Symbol of Cobalt is Co but not CO.

Statement -II: The first letter of symbol is always capital while second letter is always small.

Answer:A

Solution:Statement-I is True:

Cobalt's symbol is Co (one atom of cobalt).

CO is incorrect because it represents carbon monoxide (a compound, not an element).

Statement-II is True:

Chemical symbols follow the rule:

First letter uppercase (e.g., Cl, Na).

Second letter lowercase (e.g., Co, Fe).

COMPREHENSION TYPE

Paragraph-1:

15. The symbol of Titanium is:

A)T B)Ti C)Tm D)Tm

Answer:B

Solution:"Ti" is the standard IUPAC symbol for Titanium (atomic number 22).

Paragraph-2:

16. Atomic mass of Neon is

A)10 B)15 C)16 D)20

Answer:D

Solution:Neon (Ne) has an atomic mass of approximately 20.18 (weighted average of isotopes).

The closest option is 20 (rounded to the nearest whole number).

17. Latin name of Sodium is Natrium . Then its symbol is:

A) N B)S C)Na D)NA

Answer:C

Solution:The symbol for Sodium is derived from its Latin name Natrium.

Correct symbol: Na (first letter uppercase, second lowercase).

INTEGER TYPE

18. Atomic mass of oxygen is

Answer:16

Solution:Oxygen (O) has an average atomic mass of approximately 15.999 (often rounded to 16).

19. Number of elements whose symbols are derived from latin names with Atomic number<20.

Answer:2

Solution:Sodium (Na, Z=11) → Natrium.

Potassium (K, Z=19) → Kalium

MATRIX MATCHING TYPE

20. **Answer:A-2,B-3,C-4,D-1**

Solution:

COLUMN-I	COLUMN-II
A. Vanadium	2)V
B. Gallium	3)Ga
C.Argon	4)Ar
D.Bromine	1)Br

21. **Answer:**

Solution:A-4,B-3,C-2,D-1

COLUMN-I	COLUMN-II(ATOMIC NUMBER)
A)Calcium	4)20
B)Cobalt	3)27
C) Yttrium	2) 39
D)Manganese	1)25

LEARNERS TASK

CONCEPTUAL UNDERSTANDING QUESTIONS (CUQ's)

1. Yttrium symbol is

A) A B)Yt C)Y D)C

Answer:C

Solution:Yttrium's symbol is Y (atomic number 39).

2. O stands for symbol of:

A) Osmium B)Oxygen C)Aluminium D)Aurum

Answer:B

Solution:O is the symbol for Oxygen (atomic number 8).

3. Symbol of sulphur

A)So B)S C)st D)Sf

Answer:B

Solution:Sulphur's symbol is S (atomic number 16).

4. The short hand representation of an element is called

A)Symbol B)Element C)Substance D)Atom.

Answer:A

Solution:A symbol is the standardized shorthand notation for an element (e.g., H for Hydrogen).

5. Symbol of Rubidium is

A)R B)Ru C)Rb D)Re

Answer:C

Solution:Rubidium's symbol is Rb (atomic number 37).

6. Ni is symbol of

A)Neon B)Nitrogen C)Tin D)Nickel

Answer:D

Solution:Ni is the symbol for Nickel (atomic number 28)

7. Symbol of potassium is

A)P B)K C)Po D)Ka

Answer:B

Solution:Potassium's symbol is K (from Latin Kalium).

8. Atomic mass of carbon is

A)6 B)14 C)8 D)12

Answer:D

Solution:Carbon's atomic mass is 12.01 (rounded to 12).

9. The scientist who suggested symbols is

A) Chaptal B)Lavoiser C)J.J.Berzilius D)Neils bohr

Answer:C

Solution:Jöns Jacob Berzelius introduced the modern system of chemical symbols in 1813.

10. Symbol of sodium is

A)S B)N C)Na D)So

Answer:C

Solution:Sodium's symbol is Na (from Latin Natrium).

JEE MAIN LEVEL QUESTIONS

1. The letter used to identify an element in the periodic table is known as
A) formula B) idea C) symbol D) hint

Answer: C

Solution: Chemical symbols (e.g., H for Hydrogen, O for Oxygen) are the standard shorthand for elements.

2. What is the chemical symbol for magnesium?

A) Ma B) Mn C) M D) Mg

Answer: D

Solution: Magnesium's symbol is Mg (atomic number 12).

3. Helium is named for Helios or the sun. The symbol for helium is

A) H B) He C) Hm D) Su

Answer: B

Solution: Helium's symbol is He (atomic number 2).

4. Phosphorus glows green in the presence of oxygen. The symbol for phosphorus is:

A) K B) Ka C) P D) Ph

Answer: C

Solution: Phosphorus' symbol is P (atomic number 15)

5. Argon is found in some fluorescent lights. The symbol for argon is

A) A B) Ag C) Ar D) N

Answer: C

Solution: Argon's symbol is Ar (atomic number 18).

6. The symbol of chromium is ____.

A) Cl B) Cr C) C D) Ch

Answer: B

Solution: Chromium's symbol is Cr (atomic number 24).

7. Li is symbol of

A) Oxygen B) Lanthium C) Luetetium D) Lithium

Answer: D

Solution: Li is the symbol for Lithium (atomic number 3).

8. The element with atomic number 21 is

A) Sulphur B) Silicon C) Scandium D) Selenium

Answer: C

Solution: Scandium (Sc) has atomic number 21.

9. Which of the following is symbol of inert gas ?

A) K B) A C) Kr D) N

Answer: C

Solution: Kr is the symbol for Krypton, a noble gas (Group 18).

10. Which of the following symbol is based on latin name?

A) Carbon B) Sulphur C) Sodium D) Nitrogen

Answer: C

Solution: Sodium's symbol is Na (from Latin Natrium). Other options:

Carbon (C) and Sulphur (S) are English-derived.

Nitrogen (N) is from Greek Nitron.

JEE ADVANCED LEVEL QUESTIONS
MULTIPLE CORRECT ANSWER TYPE

11. Which of the following have atomic number less than 20?

A) Copper B) Chlorine C) Carbon D) Sulphur.

Answer: B, C, D

Solution: Atomic Numbers:

B) Chlorine (Cl): Atomic number 17 (< 20).

C) Carbon (C): Atomic number 6 (< 20).

D) Sulphur (S): Atomic number 16 (< 20).

Incorrect Option:

A) Copper (Cu): Atomic number 29 (> 20).

12. Which of the following is correct statement?

A) Symbol for Rhodium is RH. B) Symbol for Boron is B

C) Symbol for Krypton is Kr D) Atomic number of chlorine is 17

Answer: B, C, D

Solution: Correct Statements:

B) Boron = B (Atomic number 5).

C) Krypton = Kr (Atomic number 36, noble gas).

D) Chlorine's atomic number = 17.

Incorrect Statement:

A) Rhodium's symbol is Rh (not RH). Symbols are case-sensitive (second letter lowercase).

COMPREHENSION TYPE

Paragraph-1:

13. Which of the following elements symbols are not based on latin names?

A) Oxygen B) Copper C) Iron D) Sodium

Answer: A

Solution: Symbol "O" is based on English, not Latin

14. The symbol of element strontium is

A) se B) SE C) sE D) Sr

Answer: D

Solution: The symbol of element strontium is Sr

Paragraph-2:

15. Symbol P represents

A) Potassium B) Phosphorus C) Polonium D) Platinum.

Answer: B

Solution: Symbol P represents Phosphorus

INTEGER TYPE

16 Atomic number of Gallium is

Answer: 31

Solution: Atomic number of Gallium is 31

17. Atomic number of Flourine is

Answer:9

Solution:Atomic number of Flourine is 9

18. Atomic mass of oxygen is

Answer:16

Solution:Atomic mass of oxygen is 16

19. Sum of digits of atomic number Scandium is

Answer:3

Solution:Scandium has atomic number 21 $\rightarrow 2 + 1 = 3$

20. Number of elements whose symbols are derived from latin names with Atomic number < 20.

Answer:2

Solution:Latin-derived symbols with $Z < 20$:

Sodium (Na) — $Z = 11$

Potassium (K) — $Z = 19$

KEY

			TEACHING TASK						
1	2	3	4	5	6	7	8	9	10
D	B	B	A	A	B	D	A	A	B
11	12	13	14	15	16	17	18	19	
B,C	B,D	A	A	B	D	C	16	2	
20		21							
A-2,B-3,C-4,D-1		A-4,B-3,C-2,D-1							
			LEARNERS TASK						
			CONCEPTUAL UNDERSTANDING QUESTIONS (CUQ's)						
1	2	3	4	5	6	7	8	9	10
C	B	B	A	C	D	B	D	C	C
			JEE MAIN LEVEL QUESTIONS						
1	2	3	4	5	6	7	8	9	10
C	D	B	C	C	B	D	C	C	C
			JEE ADVANCED LEVEL QUESTIONS						
11	12	13	14	15	16	17	18	19	20
B,C,D	B,C,D	A	D	B	31	9	16	3	2