

India's Number 1 Education App

CHEMISTRY

BOOKS - BEIITIANS

BASICS OF CHEMISTRY

Formative Worksheet

1. Which of the following does matter posses

A. Mass

B. Volume

C. Both

D. None

Answer:

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2. A homogeneous material which contains particles of only one kind has a definite set of properties is called A. Element

B. Compound

C. Mixture

D. Both A and B

Answer:

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3. Which of the following are the examples of

elements

A. Silver

B. Carbon

C. Nitrogen

D. All

Answer:

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4. Magnesium oxide is a

A. Element

B. Compound

C. Mixture

D. Both A and B

Answer:

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5. Which of the following are elements

A. Metal

B. Metalloids

C. Non metals

D. All

Answer:



6. Which of the following is a liquid metal at

room temperature

A. Sodium

B. Magnesium

C. Mercury

D. Aluminium

Answer:



7. Which of the following metal is non mealleable

A. Sodium

B. Magnesium

C. Zinc

D. carbon

Answer:



8. Which of the following is not a metal

A. Sodium

B. Magnesium

C. Zinc

D. carbon

Answer:

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9. The number of metals among all the elements

A. 50

B. 60

C. 93

D. 80

Answer:

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10. Which of the following do not have high melting and boiling point

A. Sodium

B. Potassium

C. Calcium

D. Aluminium

Answer:

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11. Which of the following is a good conductor of electricity

A. Nitrogen

B. Sulphur

C. Graphite

D. Diamond

Answer:

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12. Which of the following non metals has high melting and boiling point

A. Oxygen

B. Phosphorus

C. Graphite

D. Diamond

Answer:

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13. Which of the following is a liquid non metal

at room temperature

A. Sulphur

B. Bromine

C. Fluorine

D. Mercury

Answer:

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14. Which of the following is colourless gas

A. Hydrogen

B. Nitrogen

C. Oxygen

D. All





15. Which of the following is a greenish yellow

gas

A. chlorine

B. Bromine

C. Iodine

D. carbon





16. The lightest element in the periodic table is

A. Hydrogen

B. Helium

C. Lithium

D. Beryllium

Answer:



17. The second lightest element is

A. Hydrogen

B. Helium

C. Lithium

D. Beryllium

Answer:

18. The most abundant element in earth's crust is

A. Oxygen

B. Silicon

C. Aluminium

D. Iron

Answer:

19. The most abundant metal in earth's crust is

A. Oxygen

B. Silicon

C. Aluminium

D. Iron

Answer:

20. Brass is

A. An element

- B. A compound
- C. Mixture
- D. None

Answer:



21. If the happens that a new element is discovered by Abdul Kalam and is named after him, then which of the following would be its expected symbol

A. AD

B. Ad

C. K

D. Al

Answer:



| 22. The symbol for different elements are |
|---|
| given below. Identify the elements |
| Н |
| Na |
| Fe |
| Watch Video Solution |

23. The symbol for different elements are given below. Identify the elements



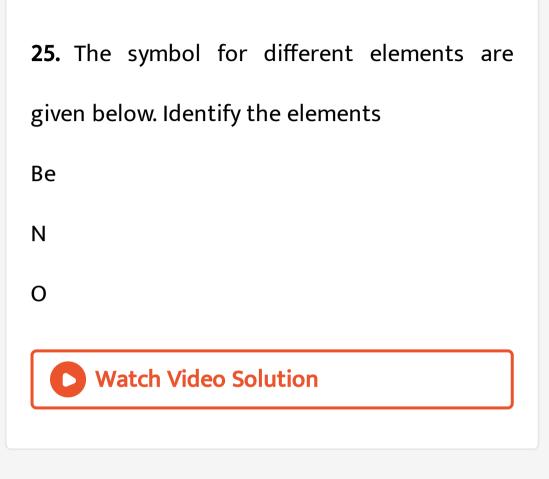
24. The symbol for different elements are given below. Identify the elements

Li

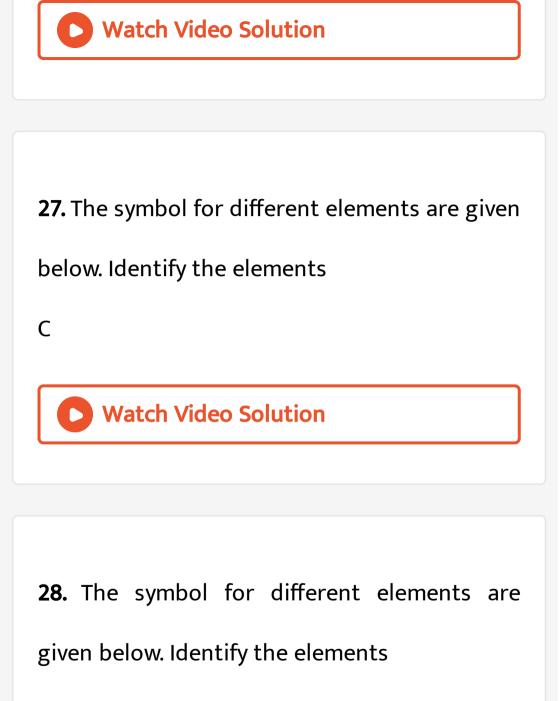
Cl

Ne





26. The symbol for different elements are given below. Identify the elements



Ν





29. The symbol for different elements are

given below. Identify the elements

0

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30. Symbols of some elements are given below.Identify the elements name and its atomic number.

S

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31. Assertion (A): The symbol of cobalt is Co and not CO, CO represents a molecule of carbon monoxide:

Reason (R): The first letter of the symbol is always capital while the second one is always small.

| A. Both assertion and reason are correct |
|--|
| and reason is the correct explanation of |
| assertion |
| B. Both assertion and reason are correct |
| and reason is not the correct |
| explanation of assertion |
| C. Assertion is correct and Reason is |
| incorrect |
| D. Assertion is incorrect and Reason is |
| correct |





32. Identify the correct statement/s

A. A symbol is defined as an abbrevation or

shorthand sign for the full name of the

element

B. The method of gaming the substance is

called chemical nomenclature

C. The representation of the substance with the help of symbol is called chemical notation D. Chemical changes can be conveniently written using chemical symbols and formulae.

Answer:

33. The scientist who suggested a method of representing elements using the English letters is

A. Lavoisier

B. JJ Berzelius

C. Robert Boyle

D. Rutherford

Answer:

34. The symbol for the element Astatine is

A. As

B. At

C. Ai

D. An

Answer:



35. The symbols for the elements selenium and

silicon are

A. Si and Se

B. S and Si

C. Se and Si

D. S and SI

Answer:

36. The symbol Sb stands for the element

A. Strontium

B. Silicon

C. Antimony

D. Selenium

Answer:



37. The elements named after scientists are

A. Mendelvium

B. Fermium

C. Nobelium

D. Curium

Answer:

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38. The elements named after countries and

laboratries is/are

A. Ruthenium

- B. Americium
- C. Berkelium
- D. Californium

Answer:



39. The elements named after the name of the

planets are

A. Uranium

- B. Neptunium
- C. Plutonium
- D. Polonium

Answer:



40. The latin names for the elements Antimony

potassium and sodium respectively are:

- A. Stibium,Kalium and Argentum
- B. Kalium, Stibium and Natrium
- C. Stibium, stannum and natrium
- D. Stibium,Kalium and Natrium

Answer:

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41. Identify the names of the elements have

symbols present in the word KArTiK and ArTi.



42. Which of the following is a neutrally charged particle

A. Proton

B. Neutron

C. Electron

D. All

Answer:

43. Which of the following is a negatively charged particle

A. Proton

B. Neutron

C. Electron

D. All

Answer:

44. The diameter of nucleus is...... Times

smaller than an atom

A. 10

B. 100

C. 1000

D. 10000

Answer:

45. The particles that are present outside the

nucleus are

A. Proton

B. Neutron

C. Electron

D. All

Answer:

46. The number of electron in neutral atom of

silicon is

A. 10

B. 12

C. 14

D. 16

Answer:

47. The number of neutrons in hydrogen

A. 0

B. 1

C. 2

D. 4

Answer:



48. The element with 10 neutrons is

A. Fluroine

B. Neon

C. Calcium

D. Both A and B

Answer:

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49. Which of the following is the element with

mass number 40

A. Argon

B. Calcium

C. Chlorine

D. Potassium

Answer:

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50. The element with same atomic number and

mass number

A. Hydrogen

- B. Helium
- C. Lithium
- D. Beryllium

Answer:



51. If Z and A are atomic number and mass number of an element. Find the number of neutrons present in it.

A. A+Z

$\mathsf{B.}\,A-Z$

$\mathsf{C}.\,Z-A$

 $\mathrm{D.}\, 2Z+A$

Answer:

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52. The mass number of chlorine is

B. 33

C. 34

D. 35

Answer:

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Conceptive Worksheet

1. Which of the following is pure substance

A. Milk

B. Cheese

C. Salt water

D. None

Answer:

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2. A pure substance isin nature

A. Homogeneous

B. Heterogeneous

C. Both

D. None

Answer:

Watch Video Solution

3. Which of the following are the examples of

elements

A. Hydrogen

B. Magnesium

C. Aluminium

D. ALL

Answer:

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4. Calcium carbonate is

A. Element

B. Compound

C. Mixture

D. Both A and B

Answer:



5. In general, metals are

A. Lustrous

B. Malleable

C. Ductle

D. ALI

Answer:

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6. Which of the following is a liquid metal at room temperature?

A. Sodium

- B. Magnesium
- C. Galium

D. carbon

Answer:

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7. Which of the following metal is non mealleable?

A. Gold

B. Copper

C. Carbon

D. Silver

Answer:

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8. Which of the following is not a metal

A. Hydrogen

B. Nitrogen

C. Oxygen

D. All

Answer:



9. Which of the following are highest among elements

A. metal

B. Non metal

C. Noble gases

D. Metalloids





10. the property of production sound by metals is called

A. malleability

B. ductility

C. sonority

D. Lustre





11. Which of the following is a inert gas

A. Hydrogen

B. Helium

C. Carbon

D. Bismuth

Answer:



12. Argon is

A. A metal

B. A non metal

C. An inert gas

D. None

Answer:



13. Which of the following is a waxy yellow solid

A. Sulphur

B. Bromine

C. Phosophorus

D. Mercury

Answer:

14. Which of the following is a reddish brown liquid

A. Sulphur

B. Bromine

C. Phosophorus

D. Mercury

Answer:

15. Which of the following is a brittle solid

A. Sulphur

B. Bromine

C. Sodium

D. Gold

Answer:

16. Which of the following is the abundant

element in the universe

A. Hydrogen

B. Sodium

C. Lithium

D. Beryllium

Answer:

17. Which of the following is a homogeneous

mixture

A. Iron and sulphur

B. Brass

C. Salt solution

D. Both B and C

Answer:

18. The most abundant non metallic gas in the

atmosphere

A. Hydrogen

B. Oxygen

C. Nitrogen

D. Fluorine

Answer:

19. The most abundant inert gas in the

atmosphere

A. Helium

B. Neon

C. Argon

D. Krypton

Answer:

20. The lightest non metal is

A. Fluroine

B. Oxygen

C. Nitrogen

D. Hydrogen

Answer:

21. Which of the following is the symbol of

mercury.

A. Mo

B. Mg

C. Hg

D. Mn

Answer:

22. Ca is the symbol for

A. C

B. Ca

C. Cd

D. Cu

Answer:



23. Which of the following is the symbol of

argon

A. Ag

B. Al

C. Ar

D. As

Answer:

24. Am is the symbol for

A. Aluminium

B. Arsenic

C. Americium

D. Silver

Answer:



25. K is the symbol for

A. Krypton

- B. Potassium
- C. Sodium
- D. Tungsten

Answer:

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26. The symbol of boron is

B.Br

С. В

D. Bi

Answer:

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27. Ru is the symbol for

A. Ruthenium

B. Rhodium

C. Radium

D. Rutherfordium

Answer:

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28. The symbol of nitrogen is

A. Ni

B. Nb

C. Ne

D. N

Answer:

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29. The symbol of an element represents

A. Short hand representation of the

element

B. One atom of that element

C. Both

D. None

Answer:

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30. Write the symbol of the element

That is most abundant in the universe

The most abundant element on the moon



32. Write the symbol of the element

The lightest inert gas



The lightest metal that can float on water



34. Write the symbol of the element

The gas abundant in the atmosphere

That forms the inert gas that is the most

abundant gas in atmosphere



36. Write the symbol of the element

It was named after the scientists , who

discovered nucleus for the first time

the name was based on the country discovered by vasco di gama.

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38. The smallest part of an element which takes part in chemical reactions and may or may not exist independently

A. Atom

B. Molecule

C. Element

D. Compound

Answer:



39. Nucleus of an atom contains

A. Proton

B. Neutron

C. Electron

D. Both A and B

Answer:

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40. Which of the following is positively charged

A. Proton

B. Neutron

C. Electron

D. All

Answer:

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41. The number of protons present inside the nucleus of an atom is called

A. Atomic mass

B. mass number

C. Atomic number

D. Ion number

Answer:

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42. In neutral atom , number of protons are equal to

- A. Number of electrons
- B. Number of neutrons
- C. Both

D. None

Answer:

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43. The element with atomic number 1 is

A. Hydrogen

B. Helium

C. Lithium

D. Beryllium





44. Which of atomic number represent that of

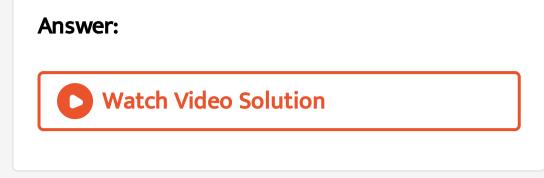
a non metal

A. 1

B. 7

C. 8

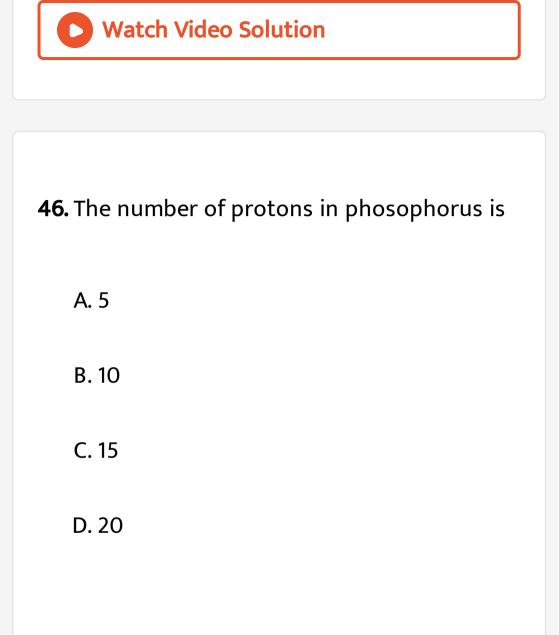
D. all



45. The atomic number of calcium is

- A. 5
- B. 10
- C. 15
- D. 20





Answer:



47. The number of protons in sulphur

A. 12

B. 14

C. 16

D. 18

Answer:

1. Assertion : sodium chloride is a pure substance

Reason: IT has a fixed number of sodium and chlorine particles

A. Both assertion and reason are correct

and reason is the correct explanation of

assertion

B. Both assertion and reason are correct

and reason is not the correct

explanation of assertion

C. Assertion is correct and Reason is

incorrect

D. Assertion is incorrect and Reason is

correct

Answer:

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2. Which of the following is true statement

A. Magnesium oxide, carbon dioxide are

pure substances

B. Milk, honey, cheese are pure substances

C. Iron, silver, oxygen are impure substances

D. Sodium chloride is an impure substance

Answer:

3. Name two elements that which are liquid metals at $30^{\circ}C$ Watch Video Solution

4. Which of the following elements can be prepared artifically by the nuclear reactions

A. Rn

B. Fe

C. Mg

D. Ca

Answer:

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5. If it happens that a new element is discovered by Bill gates educational service and is named Billium, then which one of the following would be its expected symbol B. Bi

C. Bl

D. Bm

Answer:

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6. The symbols for different elements are given

below. Identify the elements

Al

7. The symbols for different elements are given below. Identify the elements

Ar

Watch Video Solution

8. The symbols for different elements are given

below. Identify the elements

As



9. The symbols for different elements are given below. Identify the elements

Ag

Watch Video Solution

10. The symbols for different elements are given below. Identify the elements

Au

11. The symbols for different elements are given below. Identify the elements

At



12. The symbols for different elements are given below. Identify the elements

Ac

13. The symbols for different elements are

given below. Identify the elements

Am



14. Assertion (A): The symbol of cobalt is Co and not CO , CO represents a molecule of carbon monoxide:

Reason (R): The first letter of the symbol is always capital while the second one is always small?

| A. Both assertion and reason are correct |
|--|
| and reason is the correct explanation of |
| assertion |
| B. Both assertion and reason are correct |
| and reason is not the correct |
| explanation of assertion |
| C. Assertion is correct and Reason is |
| incorrect |
| D. Assertion is incorrect and Reason is |
| correct |

Answer:



15. A student has written the following symbols.

Symbol-1: MN

Symbol 2: Ca

Symbol 3: PB

Symbol 4: Cr

Symbol 5: AL

Identify the correct option/s

- A. Symbol 1 is correct
- B. Symbol 2 and 3 are incorrect
- C. Symbol 4 is correct
- D. Symbol 5 is incorrect

Answer:

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16. Identify the correct statement/s?

A. A symbol is defined as an abbrevation or shorthand sign for the full name of the element B. The method of gaming the substance is called chemical nomenclature C. The representation of the substance with the help of symbol is called chemical notation D. Chemical changes can be conveniently written using chemical symbols and

formulae.

Answer:

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17. The scientist who suggested a method of representing elements using the English letters (capital as well as small)is

A. Lavoisier

B. JJ Berzelius

C. Robert Boyle

D. Rutherford

Answer:



18. The symbol for the element Astatine is?

A. As

B. At

C. Ai

D. An

Answer:

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19. The symbols for the elements selenium and silicon are:

A. Si and Se

B. S and Si

C. Se and Si

D. S and SI

Answer:

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20. The symbol Sb stands for the element?

A. Strontium

B. Silicon

C. Antimony

D. Selenium





21. The element/s named after scientists are

A. Mendelelium

B. Fermium

C. Nobelium

D. Curium

Answer:



22. The element/s named after countries and

laboratories is/are:

A. Ruthenium

B. Americium

C. Berkelium

D. Californium

Answer:





23. The elements named after the name of the

planets are :

A. Uranium

B. Neptunium

C. Plutonium

D. Polonium

Answer:

24. Atom consist of electrons , protons and neutrons . If the mass attributed to neutron were halved and that attributed to the electrons were doubled , the atomic mass of $6C^{12}$ would be approximately :

A. Same

B. Doubled

C. Halved

D. Reduced by 25%

Answer:

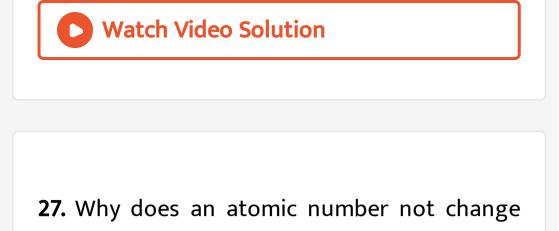


25. The atoms of all the elements contains electrons, protons and neutrons. True/False explain.

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26. What is the ratio of number of neutrons in

silicon to phosphorous.



during a chemical reaction.

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28. Find the number of electrons , protons In

Fluoride ion

29. Find the number of electrons , protons In

Sulphate ion



30. Mass number of chlorine is 35.5 True/False.



Hots Worksheet

1. Statement A: All homogeneous substances are pure Statement B: A pure substance is homogeneous in nature Statement C: Common salt solution in water is a homogeneous solution A. Statement A is true but statements B and C are false B. Statement A is false but statements B and C are true

C. Statement A and C are true but

statement B is false

D. Statement A ,B,C are all true

Answer:

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Statement A: Metals are ductile and malleable

Statement B: Zinc is the most ductile and

malleable metal

- A. Statement A is false
- B. Statement B is false
- C. Statement A and B are both true
- D. Statement A and B are both false

Answer:

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3. Which of the following statement is/are

false

A. A pure substance is heterogeneous in

nature

B. The composition of a pure substance

can be altered by any physical means

- C. A pure substance has definite set of properties
- D. A pure substance contains fixed number

of particles

Answer:

- Identify the metals present in the following compounds
- (i) Potassium chloride
- (ii) Calcium nitrate
- (iii) Aluminium chloride
 - A. i-k,Cr ii-Ca iii-Al
 - B. i- N_2 ii- Cl_2 iii- O_2
 - C. i-Po ii -C iii-Ag
 - D. i- O_2 ii - N_2 iii- Cl_2

Answer:



5. Lets have fun with symbols in this question. This part is going to test your knowledge of symbols. In general , the words will be built with different letters. But here, you need to just identify the elements with whose symbols the words are made of Identify the elements with which a TeAcHEr is

made of



6. Lets have fun with symbols in this question. This part is going to test your knowledge of symbols. In general, the words will be built with different letters. But here, you need to just identify the elements with whose symbols the words are made of Identify the element with which BHArAt is made of



7. Lets have fun with symbols in this question. This part is going to test your knowledge of symbols. In general, the words will be built with different letters. But here, you need to just identify the elements with whose symbols the words are made of Identify the elements with which army GeNErAl is made of



8. Lets have fun with symbols in this question. This part is going to test your knowledge of symbols. In general , the words will be built with different letters. But here, you need to just identify the elements with whose symbols the words are made of

Identify the elements with PHYSiCs is made of

9. The latin names for the elements Antimony potassium and sodium respectively are:

A. Stibium,Kalium and Argentum

B. Kalium, Stibium and Natrium

C. Stibium, stannum and natrium

D. Stibium,Kalium and Natrium

Answer:

10. Identify the names of the elements have symbols present in the word KArTiK and ArTi.

| Watch Video Solution |
|----------------------|
| |

A. 85

B. 95

D. 92

Answer:

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12. A tripositively charged ion of an element X has the same number of electrons as in trinegatively charged N^{-3} . Then identify X.

13. Atomic number is always equal to the number of electrons present in an atom. True/False explain.



14. The atomic number of sodium is 11

How many protons are there in the nucleus of

a sodium atom

15. The atomic number of sodium is 11

How many electrons does an atom of sodium

contain



16. The atomic number of sodium is 11

How many electrons and protons are present

in Na^+

17. State the number of protons electrons and

neutrons in the following :

Ca

Ne



18. An atom Y contains ten electrons and ten

neutrons. State

The number of protons it contains

19. An atom Y contains ten electrons and ten

neutrons. State

The mass number of Y

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20. An atom Z has a mass number twelve and

contains six electrons. State

The number of neutrons it contains

21. An atom Z has a mass number twelve and

contains six electrons. State

The atomic number of Z

Watch Video Solution

22. The NUMBER of neutrons present in bivalent +vely charged zinc ion with mass number 65

A. 32

B. 35

C. 40

D. 25

Answer:



23. Which one of the following statements about atomic number is false

A. It is equal to the number of protons

present in the nucleus

B. It is a more fundamental property of the

atom than the atomic weight

C. No two elements can have the same

atomic number

D. The atomic number of an element

decides its stability

Answer:

24. Which of the following species has more electrons than protons and more protons than neutron?

A. $D^{\,-}$

 $\mathsf{B.}\,H^{\,+}$

 $\mathsf{C}.\,D_3O^+$

D. OH^{-}

Answer:



25. The atomic weight of an element is 52 and its atomic number is 24. The number of electrons, protons and neutrons in an atom of this element will be respectively

A. 24,24,28

B. 24,28,24

C. 28,24,24

D. None

Answer:



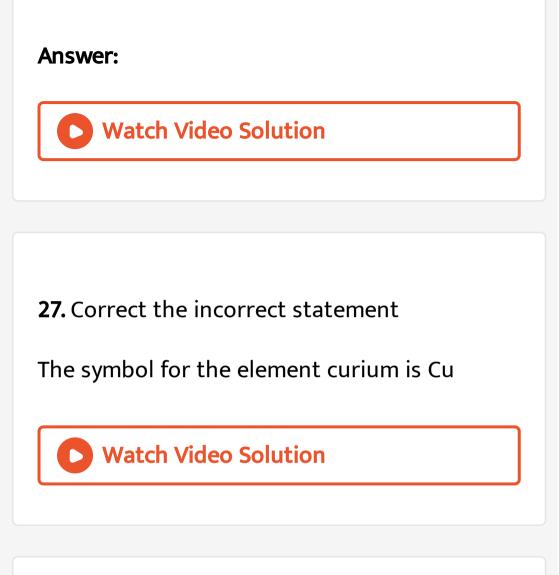
26. The atomic mass of lead is 208 and its atomic number is 82. The atomic mass of bismuth is 209 and its atomic number is 83. The ratio of neutrons/protons in the atom

A. Higher of Pb

B. Higher of Bi

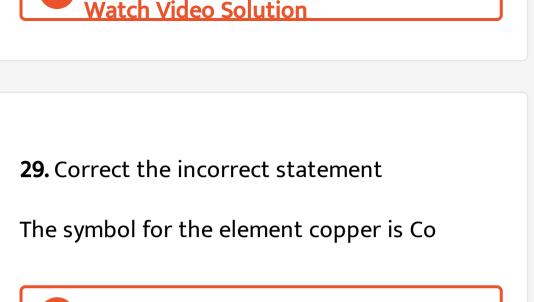
C. Same of both

D. None



28. Correct the incorrect statement

The symbol for the element Neptunium is Ne



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30. State T/F

The symbol for the element Nitrogen is Ni

31. State whether the statement is correct or

not

the symbol for the element potassium is Po



lit Jee Worksheet Mcq

1. Which of the following is the lighest metal

A. Lithium

B. Sodium

C. Magnesium

D. Aluminium

Answer:

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2. Water is

A. An element

B. A compound

C. A mixture

D. ALl

Answer:



3. The number of atoms in $CaCO_3$ molecule is

A. 2

B. 3

C. 4

D. 5

Answer:

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4. Metals are

- A. Good conductors
- **B.** Poor conductors
- C. Non conductors

Answer:



5. Which of the following is a liquid at room temperature

A. Mercury

B. gallium

C. Bromine

D. All





6. The latin name of gold is

A. Kalium

B. Natrium

C. Aurum

D. Cuprum

Answer:



7. Which of the following element named after

scientists

A. Curium

B. Sodium

C. Germanium

D. Tungsten

Answer:





8. Nucleons are:

A. Electrons+Protons

B. Neutrons+Electrons

C. Protons+Electrons

D. Electrons+Protons+Neutrons

Answer:

9. The number of neutrons in chlorine

A. 16

B. 17

C. 18

D. 19

Answer:



10. The mass number of sodium is

A. 23

B. 24

C. 25

D. 26

Answer:

11. For which of the following elements the symbols are given based on latin names

A. Potassium

B. Aluminium

C. Calcium

D. Sodium

Answer:

12. For which of the following elements the symbols are given based on latin names

A. Nobelium

B. Uranium

C. Iron

D. Neptunium

Answer:

13. Which of the following posses same

number of neutrons

A. Sodium

B. Aluminium

C. Magnesium

D. Argon

Answer:

14. Which of the following has same mass

number

A. Sodium

B. Magnesium

C. Argon

D. Calcium

Answer:

15. In which of the following elements the ratio of number of protons to the number of neutrons present in the atom is 1:1

A. Carbon

B. Aluminium

C. Argon

D. Potassium

Answer:

1. The total number of protons and neutrons present in the atom of an element is known as its mass number. It is represented by A. Mass number (A)=Number of protons +Number of neutrons (n) \Rightarrow mass of number (A)=Atomic number (Z)+ Number of neutrons (n)

 $\Rightarrow A = Z + n$

Number of neutrons in nucleus

We know $A=Z+n \Rightarrow n=A-Z$

In an element A=Z identify the element

A. Hydrogen

B. Lithium

C. Beryllium

D. Boron

Answer:

2. The total number of protons and neutrons present in the atom of an element is known as its mass number. It is represented by A. Mass number (A)=Number of protons +Number of neutrons (n) \Rightarrow mass of number (A)=Atomic number (Z)+ Number of neutrons (n)

 $\Rightarrow A = Z + n$

Number of neutrons in nucleus

We know $A=Z+n \Rightarrow n=A-Z$

A,B and C are the number of neutrons in hydrogen, helium and lithium. A+B+C=

A. 5

B. 6

C. 7

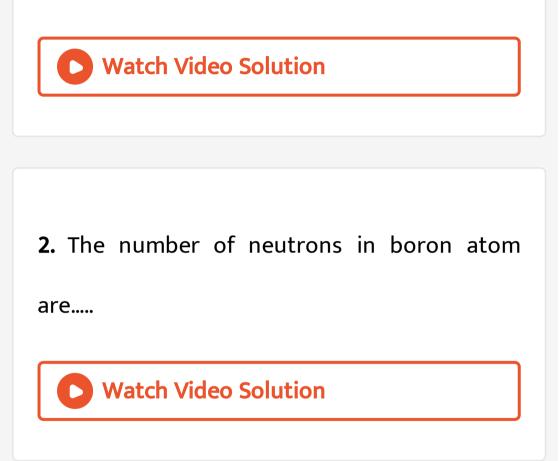
D. 8

Answer:

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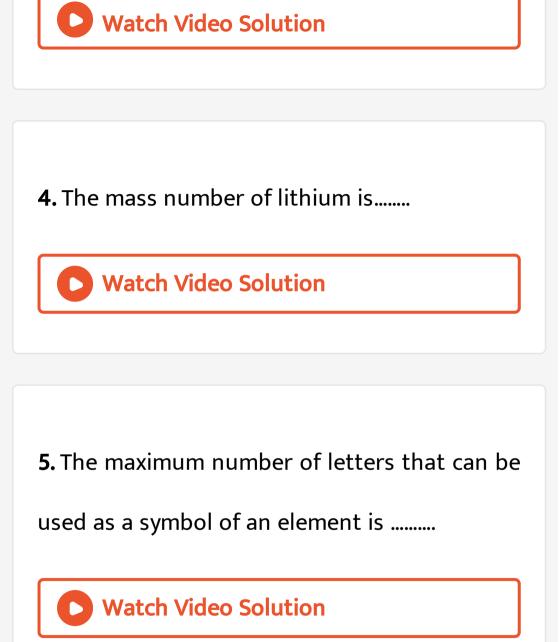
lit Jee Worksheet Integer Type

1. The number of inert gas are......



3. The number of electrons in Fluroine atom

are.....



lit Jee Worksheet Matrix Matching

1. Match the following

Column – I Column – II

- (A) Cu (p) Based on planet's name
- (B) Cm (q) Based on country's name
- (C) Cf (r) Based on scientist's name
- (D) Pu (s) Based on Latin name

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1. Match the following

| Column – I | Column – II |
|----------------|-------------|
| (A) Rubidium | P) Pd |
| (B) Palladium | Q) Ra |
| (C) Molybdenum | R) Rb |
| (D) Radium | S) Mo |