NOVA SCOTIA CHEMISTRY 11 · UNIT B · 25 QUESTIONS

From Structures to Properties — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **An atom has atomic number 8 and mass number 11. The number of neutrons is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **An atom has atomic number 12 and mass number 17. The number of neutrons is**

ANSWER _____

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3 **An atom has atomic number 12 and mass number 19. The number of neutrons is**

ANSWER _____

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4 **An atom has 6 protons and 6 neutrons. Its mass number is**

ANSWER _____

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5 **An ion has 11 protons and 10 electrons. Its charge is**

ANSWER _____

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6 **An ion has 17 protons and 18 electrons. Its charge is**

ANSWER _____

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7 **The atomic number of an element equals its number of**

A neutrons

B protons

C electrons always

D shells

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8 **Isotopes of an element differ in their number of**

A protons

B neutrons

C electrons in a neutral atom

D shells

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9

An ionic bond forms mainly by

A sharing electrons equally

B pooling electrons in metals only

C transfer of electrons

D overlapping orbitals only

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10

A covalent bond forms mainly by

A transfer of electrons

B losing protons

C gaining neutrons

D sharing electrons

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11 **A polar molecule has an uneven distribution of**

A charge

B mass

C size

D colour

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12 **Hydrogen bonding is strongest between molecules containing hydrogen bonded to**

A carbon only

B nitrogen, oxygen or fluorine

C sulfur only

D any metal

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13 **London dispersion forces are present between**

A ionic compounds only

B metals only

C all molecules

D polar molecules only

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14 **Water has a bent shape because oxygen has**

A no lone pairs

B four bonds

C one lone pair only

D two lone pairs

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15 **Methane has a shape described as**

A tetrahedral

B linear

C bent

D trigonal planar

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16 **Carbon dioxide has a shape described as**

A bent

B linear

C tetrahedral

D pyramidal

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17 **The diagram shows a water molecule with two lone pairs on oxygen. Its shape is**



- **A** linear
- **B** tetrahedral
- **C** bent
- **D** trigonal planar

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18 **Ionic compounds usually have melting points that are**

- **A** very low
- **B** zero
- **C** variable only
- **D** high

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19 **A metal is malleable because its atoms are held in a**

A sea of delocalised electrons

B rigid covalent network

C molecular lattice only

D gas

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20 **Electronegativity increases across a period mainly because of increasing**

A atomic size

B nuclear charge

C neutron number

D mass only

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21 **Atomic radius generally decreases across a period because electrons are pulled**

A away from the nucleus

B into new shells

C closer to the nucleus

D out of atoms

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22 **A noble gas has a full outer shell and is therefore usually**

A highly reactive

B metallic

C ionic

D unreactive

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23 **A halogen gains one electron to form an ion with charge**

- A 1 minus
- B 1 plus
- C 2 minus
- D 2 plus

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24 **A group 1 metal loses one electron to form an ion with charge**

- A 1 minus
- B 1 plus
- C 2 plus
- D 0

Understand It with Pulse | Flag a mistake

25 **The octet rule describes atoms tending to gain a full outer shell of**

A 2 electrons always

B 18 electrons

C 8 electrons

D 4 electrons

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	3	**10.**	D	**19.**	A
2.	5	**11.**	A	**20.**	B
3.	7	**12.**	B	**21.**	C
4.	12	**13.**	C	**22.**	D
5.	1	**14.**	D	**23.**	A
6.	-1	**15.**	A	**24.**	B
7.	B	**16.**	B	**25.**	C
8.	B	**17.**	C		
9.	C	**18.**	D		

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