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Unit 3 - Week 1

Week 1 : Assignment 1

The due date for submitting this assignment has passed. Due on 2020-02-12, 23:59 IST.
As per our records you have not submitted this assignment.

1) Which of the following configurations would you expect to have the highest second ionization energy? ***1 point***

- $1s^2 2s^2$
- $1s^2 2s^2 2p^4$
- $1s^2 2s^2 2p^6 3s^1$
- $1s^2 2s^2 2p^1$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$1s^2 2s^2 2p^6 3s^1$

2) Which one will be the correct order of electron affinity of halogens? ***1 point***

- At < I < Br < F < Cl
- At < I < Br < Cl < F
- F < I < Br < At < Cl
- At > I > Br > F < Cl

No, the answer is incorrect.
Score: 0
Accepted Answers:
At < I < Br < F < Cl

3) According to modern periodic law, the physical and chemical properties of the element are periodic function of their ***1 point***

- Atomic number
- Atomic weight

- Atomic size
- Atomic volume

No, the answer is incorrect.
Score: 0
Accepted Answers:
Atomic number

4) All elements belonging to second period are ***1 point***

- Normal elements
- Transitional
- Stable elements
- Halogens

No, the answer is incorrect.
Score: 0
Accepted Answers:
Normal elements

5) The correct order regarding the electronegativity of hybrid obital of carbon is: ***1 point***

- $sp > sp^2 > sp^3$
- $sp < sp^2 > sp^3$
- $sp < sp^2 < sp^3$
- $sp > sp^2 < sp^3$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$sp > sp^2 > sp^3$

6) Which one will be the correct electronic configuration for Cr? ***1 point***

- $[Ar]3d^4 4s^2$
- $[Ar]3d^5 4s^2$
- $[Ne]3d^5 4s^2$
- $[Ar]3d^5 4s^1$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$[Ar]3d^5 4s^1$

7) Which statement is incorrect about the Slater's rule. ***1 point***

- An amount of 0.35 from each other electron within the same group except for the [1s] group, where the other electron contributes only 0.30.
- If the group is of the [ns, np] type, an amount of 0.85 from each electron with principal quantum number (n–1), and an amount of 1.00 for each electron with principal quantum number (n–2) or less.
- If the group is of the [d] or [f], type, an amount of 1.00 for each electron "closer" to the nucleus than the group.
- All electrons in the higher principal shell contribute 0.75 to the shielding constant.

No, the answer is incorrect.
Score: 0
Accepted Answers:
All electrons in the higher principal shell contribute 0.75 to the shielding constant.

8) Calculate the effective nuclear charge for the 4s electron of Fe atom which has the atomic number 26 and electronic configuration $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^2$. ***1 point***

- 3.75
- 6.25
- 2.75
- 3.25

No, the answer is incorrect.
Score: 0

Accepted Answers:
3.75

9) Calculate the effective nuclear charge for the 2p electron of F atom. (Atomic number of F is 9)

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Numeric) 5.20
(Type: Numeric) 5.2

1 point

10) Which one will be the correct increasing order of effective nuclear charge among the following elements ***1 point***

O, F, Ne, C, N

- O<F<Ne<C<N
- C<N<O<F<Ne
- Ne>F<O<N<C
- F<O<C<N<Ne

No, the answer is incorrect.
Score: 0

Accepted Answers:
C<N<O<F<Ne