

Electron Configurations

Apprentice Difficulty Level

Question Group 1

Question 1

Identify the complete electron configuration for an atom of the element **lithium (Li)**:

$1s^1$

$1s^2 1p^1$

$1s^2 2s^1$

$1s^2 2p^1$

$2s^2 2p^1$

Question 2

Identify the complete electron configuration for an atom of the element **beryllium (Be)**:

$1s^2$

$1s^2 1p^2$

$1s^2 2p^2$

$1s^2 2s^2$

$2s^2 2p^2$

Question Group 2

Question 3

Identify the complete electron configuration for an atom of the element **boron (B)**:

$1s^2 1p^1$

$1s^2 2p^1$

$1s^2 2p^3$

$1s^2 2s^2 2p^1$

$1s^2 2s^2 2p^3$

Question 4

Identify the complete electron configuration for an atom of the element **carbon (C)**:

$1s^2 2p^2$

$2s^2 2p^2$

$1s^2 2p^4$

$1s^2 2s^2 2p^4$

$1s^2 2s^2 2p^2$

Question Group 3

Question 5

Identify the complete electron configuration for an atom of the element **nitrogen (N)**:

$1s^2 2p^3$

$2s^2 2p^3$

$1s^2 2p^3$

$1s^2 2s^2 2p^5$

$1s^2 2s^2 2p^3$

Question 6

Identify the complete electron configuration for an atom of the element **oxygen (O)**:

$1s^2 2p^4$

$2s^2 2p^4$

$1s^2 2p^4$

$1s^2 2s^2 2p^6$

$1s^2 2s^2 2p^4$

Question 7

Identify the complete electron configuration for an atom of the element **fluorine (F)**:

$1s^2 2p^5$

$2s^2 2p^5$

$1s^2 2p^5$

$1s^2 2s^2 2p^7$

$1s^2 2s^2 2p^5$

Question Group 4

Question 8

Identify the complete electron configuration for an atom of the element **sodium (Na)**:

$1s^2 2s^2 3s^1$

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

$1s^2 2p^8 3s^1$

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

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

Question 9

Identify the complete electron configuration for an atom of the element **magnesium (Mg)**:

$1s^2 2s^2 3s^2$

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

$1s^2 2p^8 3s^2$

$2s^2 2p^6 3s^2$

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

Question Group 5

Question 10

Identify the complete electron configuration for an atom of the element **aluminum (Al)**:

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

$1s^2 2s^2 3s^2 3p^1$

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

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

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

Question 11

Identify the complete electron configuration for an atom of the element **silicon (Si)**:

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

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

$2s^2 2p^6 3s^2 3p^2$

$1s^2 2s^2 3s^2 3p^2$

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

Question Group 6

Question 12

Identify the complete electron configuration for an atom of the element **phosphorus (P)**:

$1s^2 2p^6 3p^5$

$1s^2 2s^2 2p^6 3p^5$

$2s^2 2p^6 3s^2 3p^3$

$1s^2 2s^2 3s^2 3p^3$

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

Question 13

Identify the complete electron configuration for an atom of the element **sulfur (S)**:

- 1s² 2p⁶ 3p⁶
- 1s² 2s² 2p⁶ 3p⁶
- 2s² 2p⁶ 3s² 3p⁴
- 1s² 2s² 3s² 3p⁴
- 1s² 2s² 2p⁶ 3s² 3p⁴

Question 14

Identify the complete electron configuration for an atom of the element **chlorine (Cl)**:

- 1s² 2p⁶ 3p⁷
- 1s² 2s² 2p⁶ 3p⁷
- 2s² 2p⁶ 3s² 3p⁵
- 1s² 2s² 3s² 3p⁵
- 1s² 2s² 2p⁶ 3s² 3p⁵

Master Difficulty Level

Question Group 7

Question 15

Identify the complete electron configuration for an atom of the element **potassium (K)**:

- 1s² 2p⁸ 3p⁸ 4s¹
- 1s² 2s⁸ 3s⁸ 4s¹
- 1s² 2s² 2p⁶ 3s² 3p⁶ 3d¹
- 1s² 2s² 2p⁶ 3s² 3p⁶ 4s¹
- 1s² 2s² 2p⁶ 3s² 3p⁶ 3d¹⁰ 4s¹

Question 16

Identify the complete electron configuration for an atom of the element **calcium (Ca)**:

- 1s² 2p⁸ 3p⁸ 4s²
- 1s² 2s⁸ 3s⁸ 4s²
- 1s² 2s² 2p⁶ 3s² 3p⁶ 3d²
- 1s² 2s² 2p⁶ 3s² 3p⁶ 4s²
- 1s² 2s² 2p⁶ 3s² 3p⁶ 3d¹⁰ 4s²

Question Group 8

Question 17

Identify the complete electron configuration for an atom of the element **gallium (Ga)**:

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{11}$

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

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^{12} 4p^1$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^1$

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^1$

Question 18

Identify the complete electron configuration for an atom of the element **germanium (Ge)**:

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{12}$

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

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^{12} 4p^2$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^2$

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2$

Question Group 9

Question 19

Identify the complete electron configuration for an atom of the element **arsenic (As)**:

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

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^3$

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

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^3$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^3$

Question 20

Identify the complete electron configuration for an atom of the element **selenium (Se)**:

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

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

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^4$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^4$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^4$

Question 21

Identify the complete electron configuration for an atom of the element **bromine (Br)**:

1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 4p⁵
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d⁶ 4p⁵
1s² 2s² 2p⁶ 3s² 3p⁶ 3d¹⁰ 4s² 4p⁵
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 4d¹⁰ 4p⁵
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d¹⁰ 4p⁵

Question Group 10

Question 22

Identify the complete electron configuration for an atom of the element **tin (Sn)**:

1s² 2s² 2p⁶ 3s² 3p⁶ 3d¹⁰ 4s² 4p⁶ 4d¹⁰ 5s² 5p²
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 4d¹⁰ 4p⁶ 5s² 5d¹⁰ 5p²
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d¹⁰ 4p⁶ 5s² 4d¹⁰ 5p²
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d¹⁰ 4p⁶ 5s² 4f¹⁴ 4d¹⁰ 5p²
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d¹⁰ 4p⁶ 5s² 3f¹⁴ 4d¹⁰ 5p²

Question 23

Identify the complete electron configuration for an atom of the element **tellurium (Te)**:

1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 4d¹⁰ 4p⁶ 5s² 5d¹⁰ 5p⁴
1s² 2s² 2p⁶ 3s² 3p⁶ 3d¹⁰ 4s² 4p⁶ 4d¹⁰ 5s² 5p⁴
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d¹⁰ 4p⁶ 5s² 4d¹⁰ 5p⁴
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d¹⁰ 4p⁶ 5s² 4f¹⁴ 4d¹⁰ 5p⁴
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d¹⁰ 4p⁶ 5s² 3f¹⁴ 4d¹⁰ 5p⁴

Question 24

Identify the complete electron configuration for an atom of the element **iodine (I)**:

1s² 2s² 2p⁶ 3s² 3p⁶ 3d¹⁰ 4s² 4p⁶ 4d¹⁰ 5s² 5p⁵
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 4d¹⁰ 4p⁶ 5s² 5d¹⁰ 5p⁵
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d¹⁰ 4p⁶ 5s² 4d¹⁰ 5p⁵
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d¹⁰ 4p⁶ 5s² 3f¹⁴ 4d¹⁰ 5p⁵
1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d¹⁰ 4p⁶ 5s² 4f¹⁴ 4d¹⁰ 5p⁵

Question Group 11

Question 25

Identify the complete electron configuration for an atom of the element **vanadium (V)**:

1s² 2s² 2p⁶ 3s² 3p⁶ 4d⁵
1s² 2s² 2p⁶ 3s² 3p⁶ 3d⁵

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

Question 26

Identify the complete electron configuration for an atom of the element **chromium (Cr)**:

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

Question 27

Identify the complete electron configuration for an atom of the element **iron (Fe)**:

$1s^2 2s^2 2p^6 3s^2 3p^6 4d^8$
 $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8$
 $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^2$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^6$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^6$

Question Group 12

Question 28

Identify the complete electron configuration for an atom of the element **nickel (Ni)**:

$1s^2 2s^2 2p^6 3s^2 3p^6 4d^{10}$
 $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10}$
 $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8 4s^2$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^8$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^8$

Question 29

Identify the complete electron configuration for an atom of the element **copper (Cu)**:

$1s^2 2s^2 2p^6 3s^2 3p^6 4d^{11}$
 $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{11}$
 $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9 4s^2$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^9$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^9$

Question 30

Identify the complete electron configuration for an atom of the element **zinc (Zn)**:

$1s^2 2s^2 2p^6 3s^2 3p^6 4d^{12}$

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{12}$

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10}$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10}$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10}$

Wizard Difficulty Level

Question Group 13

Question 31

Identify the complete electron configuration for an ion of the element **sodium (Na^+)**:

$1s^2 2s^2 2p^6$

$1s^2 2s^2 2p^7$

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

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

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

Question 32

Identify the complete electron configuration for an ion of the element **sodium (Mg^{2+})**:

$1s^2 2s^2 2p^6$

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

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

$2s^2 2p^6 3s^2 3p^2$

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

Question Group 14

Question 33

Identify the complete electron configuration for an ion of the element **potassium (K^+)**:

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

$1s^2 2s^2 2p^6 3s^2 3p^7$

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

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

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

Question 34

Identify the complete electron configuration for an ion of the element **calcium (Ca^{2+})**:

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

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

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

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

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

Question Group 15**Question 35**

Identify the complete electron configuration for an ion of the element **aluminum**

(Al^{3+}):

$1s^2 2s^2 2p^6$

$1s^2 2s^2 2p^6 3s^5$

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

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

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

Question 36

Identify the complete electron configuration for an ion of the element **phosphorus (P^{3-})**:

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

$1s^2 2s^2 2p^6$

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

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

$1s^2 2s^2 2p^6 3s^2 3d^{10} 3p^3$

Question Group 16**Question 37**

Identify the complete electron configuration for an ion of the element **oxygen (O^{2-})**:

$1s^2 2s^2 2p^6$

$1s^2 2s^2 2p^4$

$1s^2 2s^2 2p^2$

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

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

Question 38

Identify the complete electron configuration for an ion of the element **fluorine (F⁻)**:

$1s^2 2s^2 2p^6$

$1s^2 2s^2 2p^5$

$1s^2 2s^2 2p^4$

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

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

Question Group 17

Question 39

Identify the complete electron configuration for an ion of the element **selenium (Se²⁻)**:

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^4$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^2$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^4$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^6$

Question 40

Identify the complete electron configuration for an ion of the element **bromine (Br⁻)**:

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^5$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^4$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^5$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^6$

Question Group 18

Question 41

Identify the complete electron configuration for an ion of the element **sulfur (S²⁻)**:

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

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

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

$1s^2 2s^2 2p^6 3s^2 3d^{10} 3p^6$

$1s^2 2s^2 2p^6 3s^2 3d^{10} 3p^4$

Question 42

Identify the complete electron configuration for an ion of the element **chlorine (Cl⁻)**:

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

$1s^2 2s^2 2p^6 3s^2 3p^5$

$1s^2 2s^2 2p^6 3s^2 3p^4$
 $1s^2 2s^2 2p^6 3s^2 3d^{10} 3p^6$
 $1s^2 2s^2 2p^6 3s^2 3d^{10} 3p^5$

Apprentice Difficulty Level

Question Group 1

Question 1

Identify the complete electron configuration for an atom of the element lithium (Li):

$1s^2 2s^1$
 $1s^1$
 $1s^2 1p^1$
 $1s^2 2p^1$
 $2s^2 2p^1$

Question 2

Identify the complete electron configuration for an atom of the element beryllium (Be):

$1s^2 2s^2$
 $1s^2$
 $1s^2 1p^2$
 $1s^2 2p^2$
 $2s^2 2p^2$

Question Group 2

Question 3

Identify the complete electron configuration for an atom of the element boron (B):

$1s^2 2s^2 2p^1$
 $1s^2 1p^1$
 $1s^2 2p^1$
 $1s^2 2p^3$
 $1s^2 2s^2 2p^3$

Question 4

Identify the complete electron configuration for an atom of the element carbon (C):

$1s^2 2s^2 2p^2$
 $1s^2 2p^2$

$2s^2 2p^2$
 $1s^2 2p^4$
 $1s^2 2s^2 2p^4$

Question Group 3

Question 5

Identify the complete electron configuration for an atom of the element nitrogen (N):

$1s^2 2s^2 2p^3$
 $1s^2 2p^3$
 $2s^2 2p^3$
 $1s^2 2p^3$
 $1s^2 2s^2 2p^5$

Question 6

Identify the complete electron configuration for an atom of the element oxygen (O):

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

Question 7

Identify the complete electron configuration for an atom of the element fluorine (F):

$1s^2 2s^2 2p^5$
 $1s^2 2p^5$
 $2s^2 2p^5$
 $1s^2 2p^5$
 $1s^2 2s^2 2p^7$

Question Group 4

Question 8

Identify the complete electron configuration for an atom of the element sodium (Na):

$1s^2 2s^2 2p^6 3s^1$
 $1s^2 2p^6 3s^1$
 $1s^2 2p^8 3s^1$
 $2s^2 2p^6 3s^1$
 $1s^2 2s^2 3s^1$

Question 9

Identify the complete electron configuration for an atom of the element magnesium (Mg):

- 1s² 2s² 2p⁶ 3s²
- 1s² 2p⁶ 3s²
- 1s² 2p⁸ 3s²
- 2s² 2p⁶ 3s²
- 1s² 2s² 3s²

Question Group 5

Question 10

Identify the complete electron configuration for an atom of the element aluminum (Al):

- 1s² 2s² 2p⁶ 3s² 3p¹
- 1s² 2p⁶ 3p³
- 1s² 2s² 2p⁶ 3p³
- 2s² 2p⁶ 3s² 3p¹
- 1s² 2s² 3s² 3p¹

Question 11

Identify the complete electron configuration for an atom of the element silicon (Si):

- 1s² 2s² 2p⁶ 3s² 3p²
- 1s² 2p⁶ 3p⁴
- 1s² 2s² 2p⁶ 3p⁴
- 2s² 2p⁶ 3s² 3p²
- 1s² 2s² 3s² 3p²

Question Group 6

Question 12

Identify the complete electron configuration for an atom of the element phosphorus (P):

- 1s² 2s² 2p⁶ 3s² 3p³
- 1s² 2p⁶ 3p⁵
- 1s² 2s² 2p⁶ 3p⁵
- 2s² 2p⁶ 3s² 3p³
- 1s² 2s² 3s² 3p³

Question 13

Identify the complete electron configuration for an atom of the element sulfur (S):

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

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

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

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

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

Question 14

Identify the complete electron configuration for an atom of the element chlorine (Cl):

$1s^2 2s^2 2p^6 3s^2 3p^5$

$1s^2 2p^6 3p^7$

$1s^2 2s^2 2p^6 3p^7$

$2s^2 2p^6 3s^2 3p^5$

$1s^2 2s^2 3s^2 3p^5$

Master Difficulty Level

Question Group 7

Question 15

Identify the complete electron configuration for an atom of the element potassium (K):

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

$1s^2 2p^8 3p^8 4s^1$

$1s^2 2s^8 3s^8 4s^1$

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^1$

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^1$

Question 16

Identify the complete electron configuration for an atom of the element calcium (Ca):

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

$1s^2 2p^8 3p^8 4s^2$

$1s^2 2s^8 3s^8 4s^2$

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^2$

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2$

Question Group 8

Question 17

Identify the complete electron configuration for an atom of the element gallium (Ga):

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^1$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{11}$

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

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^1$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^{12} 4p^1$

Question 18

Identify the complete electron configuration for an atom of the element germanium (Ge):

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^2$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{12}$

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

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2$

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^{12} 4p^2$

Question Group 9

Question 19

Identify the complete electron configuration for an atom of the element arsenic (As):

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^3$

$1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 3d^6 4p^3$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 4p^3$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $3d^{10} 4s^2 4p^3$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 4d^{10} 4p^3$

Question 20

Identify the complete electron configuration for an atom of the element selenium (Se):

$1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 3d^{10} 4p^4$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 3d^6 4p^4$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 4p^4$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $3d^{10} 4s^2 4p^4$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 4d^{10} 4p^4$

Question 21

Identify the complete electron configuration for an atom of the element bromine (Br):

$1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 3d^{10} 4p^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 3d^6 4p^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 4p^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $3d^{10} 4s^2 4p^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 4d^{10} 4p^5$

Question Group 10

Question 22

Identify the complete electron configuration for an atom of the element tin (Sn):

- 1s² 2s² 2p⁶ 3s² 3p⁶
4s² 3d¹⁰ 4p⁶ 5s²
4d¹⁰ 5p²
- 1s² 2s² 2p⁶ 3s² 3p⁶
4s² 4d¹⁰ 4p⁶ 5s²
5d¹⁰ 5p²
- 1s² 2s² 2p⁶ 3s² 3p⁶
3d¹⁰ 4s² 4p⁶ 4d¹⁰
5s² 5p²
- 1s² 2s² 2p⁶ 3s² 3p⁶
4s² 3d¹⁰ 4p⁶ 5s²
4f¹⁴ 4d¹⁰ 5p²
- 1s² 2s² 2p⁶ 3s² 3p⁶
4s² 3d¹⁰ 4p⁶ 5s²
3f¹⁴ 4d¹⁰ 5p²

Question 23

Identify the complete electron configuration for an atom of the element tellurium (Te):

- 1s² 2s² 2p⁶ 3s² 3p⁶
4s² 3d¹⁰ 4p⁶ 5s²
4d¹⁰ 5p⁴
- 1s² 2s² 2p⁶ 3s² 3p⁶
4s² 4d¹⁰ 4p⁶ 5s²
5d¹⁰ 5p⁴
- 1s² 2s² 2p⁶ 3s² 3p⁶
3d¹⁰ 4s² 4p⁶ 4d¹⁰
5s² 5p⁴
- 1s² 2s² 2p⁶ 3s² 3p⁶
4s² 3d¹⁰ 4p⁶ 5s²
4f¹⁴ 4d¹⁰ 5p⁴
- 1s² 2s² 2p⁶ 3s² 3p⁶
4s² 3d¹⁰ 4p⁶ 5s²
3f¹⁴ 4d¹⁰ 5p⁴

Question 24

Identify the complete electron configuration for an atom of the element iodine (I):

$1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 3d^{10} 4p^6 5s^2$
 $4d^{10} 5p^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 4d^{10} 4p^6 5s^2$
 $5d^{10} 5p^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $3d^{10} 4s^2 4p^6 4d^{10}$
 $5s^2 5p^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 3d^{10} 4p^6 5s^2$
 $4f^{14} 4d^{10} 5p^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 3d^{10} 4p^6 5s^2$
 $3f^{14} 4d^{10} 5p^5$

Question Group 11

Question 25

Identify the complete electron configuration for an atom of the element vanadium (V):

$1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 3d^3$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4s^2 4d^3$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $4d^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $3d^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $3d^3 4s^2$

Question 26

Identify the complete electron configuration for an atom of the element chromium (Cr):

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

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

Question 27

Identify the complete electron configuration for an atom of the element **iron** (Fe):

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^6$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^6$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4d^8$
 $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8$
 $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^2$

Question Group 12

Question 28

Identify the complete electron configuration for an atom of the element **nickel** (Ni):

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^8$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^8$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4d^{10}$
 $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10}$
 $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8 4s^2$

Question 29

Identify the complete electron configuration for an atom of the element copper (Cu):

- 1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d⁹
- 1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 4d⁹
- 1s² 2s² 2p⁶ 3s² 3p⁶ 4d¹¹
- 1s² 2s² 2p⁶ 3s² 3p⁶ 3d¹¹
- 1s² 2s² 2p⁶ 3s² 3p⁶ 3d⁹ 4s²

Question 30

Identify the complete electron configuration for an atom of the element zinc (Zn):

- 1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 3d¹⁰
- 1s² 2s² 2p⁶ 3s² 3p⁶ 4s² 4d¹⁰
- 1s² 2s² 2p⁶ 3s² 3p⁶ 4d¹²
- 1s² 2s² 2p⁶ 3s² 3p⁶ 3d¹²
- 1s² 2s² 2p⁶ 3s² 3p⁶ 3d¹⁰

Wizard Difficulty Level

Question Group 13

Question 31

Identify the complete electron configuration for an ion of the element sodium
(Na⁺):

1s² 2s² 2p⁶
1s² 2s² 2p⁶ 3s¹
1s² 2s² 2p⁶ 3s²
1s² 2s² 2p⁷
2s² 2p⁶ 3s¹

Question 32

Identify the complete electron configuration for an ion of the element sodium
(Mg²⁺):

1s² 2s² 2p⁶
1s² 2s² 2p⁶ 3s²
1s² 2s² 2p⁶ 3s⁴
1s² 2s² 2p⁶ 3s² 3p²
2s² 2p⁶ 3s² 3p²

Question Group 14

Question 33

Identify the complete electron configuration for an ion of the element potassium
(K⁺):

1s² 2s² 2p⁶ 3s² 3p⁶
1s² 2s² 2p⁶ 3s² 3p⁶
4s¹
1s² 2s² 2p⁶ 3s² 3p⁶
4s²
1s² 2s² 2p⁶ 3s² 3p⁷
2s² 2p⁶ 3s² 3p⁶ 4s¹

Question 34

Identify the complete electron configuration for an ion of the element calcium
(Ca²⁺):

1s² 2s² 2p⁶ 3s² 3p⁶
1s² 2s² 2p⁶ 3s² 3p⁶
4s²

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

Question Group 15

Question 35

Identify the complete electron configuration for an ion of the element aluminum (Al^{3+}):

$1s^2 2s^2 2p^6$
 $1s^2 2s^2 2p^6 3s^2 3p^1$
 $1s^2 2s^2 2p^6 3s^2 3p^4$
 $1s^2 2s^2 2p^6 3s^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6$

Question 36

Identify the complete electron configuration for an ion of the element phosphorus (P^{3-}):

$1s^2 2s^2 2p^6 3s^2 3p^6$
 $1s^2 2s^2 2p^6 3s^2 3p^3$
 $1s^2 2s^2 2p^6 3s^2$
 $1s^2 2s^2 2p^6$
 $1s^2 2s^2 2p^6 3s^2$
 $3d^{10} 3p^3$

Question Group 16

Question 37

Identify the complete electron configuration for an ion of the element oxygen (O^{2-}):

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

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

Question 38

Identify the complete electron configuration for an ion of the element fluorine (F⁻):

$1s^2 2s^2 2p^6$
 $1s^2 2s^2 2p^5$
 $1s^2 2s^2 2p^4$
 $1s^2 2s^2 2p^6 3s^2 3p^6$
 $1s^2 2s^2 2p^6 3s^2 3p^4$

Question Group 17

Question 39

Identify the complete electron configuration for an ion of the element selenium (Se²⁻):

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^4$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^2$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^4$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6$

Question 40

Identify the complete electron configuration for an ion of the element bromine (Br⁻):

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^5$
 $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^4$

1s² 2s² 2p⁶ 3s² 3p⁶
4s² 4d¹⁰ 4p⁵
1s² 2s² 2p⁶ 3s² 3p⁶
4s² 4d¹⁰ 4p⁶

Question Group 18

Question 41

Identify the complete electron configuration for an ion of the element sulfur
(S²⁻):

1s² 2s² 2p⁶ 3s² 3p⁶
1s² 2s² 2p⁶ 3s² 3p⁴
1s² 2s² 2p⁶ 3s² 3p²
1s² 2s² 2p⁶ 3s²
3d¹⁰ 3p⁶
1s² 2s² 2p⁶ 3s²
3d¹⁰ 3p⁴

Question 42

Identify the complete electron configuration for an ion of the element chlorine
(Cl⁻):

1s² 2s² 2p⁶ 3s² 3p⁶
1s² 2s² 2p⁶ 3s² 3p⁵
1s² 2s² 2p⁶ 3s² 3p⁴
1s² 2s² 2p⁶ 3s²
3d¹⁰ 3p⁶
1s² 2s² 2p⁶ 3s²
3d¹⁰ 3p⁵

