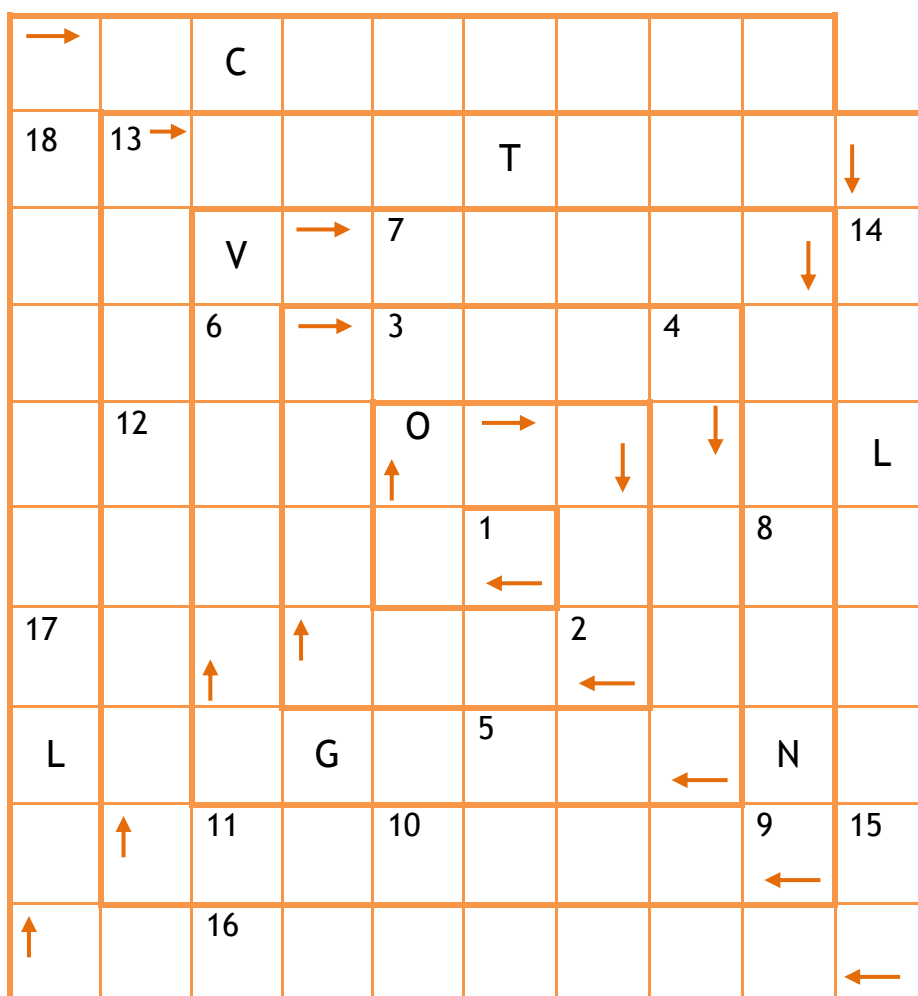


Answer each of the following clues in the quiz by starting in the square 1 at the centre of the grid and writing your answer in a clockwise spiral. The last letter of each answer is the first letter of the next. To help you arrows are given and you must not cross over the bold lines. Also the number of letters to each answer is given in brackets.



1. An atom of the same element with a variable numbers of neutrons (7)
2. A negatively charged particle (8)
3. A noble gas whose atom contains ten electrons (4)
4. An atomic particle which has the same mass as a proton (7)
5. This describes the charge on a particle which has more electrons than protons (8)
6. This describes the number of protons, electrons and neutrons in an oxygen atom (4)
7. A gas found in the air with seven protons and seven neutrons in the nucleus of its atom (8)
8. The number of neutrons found in a hydrogen atom (4)
9. The maximum number of electrons in the second energy level (shell) (5)
10. The maximum number of electrons in the first energy level (shell) (3)
11. This atom has an electronic structure of 2.6 (6)
12. The number of electrons in a fluorine atom (4)
13. .... structure describes the arrangement of electrons in the various energy levels or shells (10)
14. This element has a total of twenty electrons in its atom (7)
15. This element has a mass number of twenty four (9)
16. This describes the type of elements which lose electrons to form positive ions (6)
17. The element which has an atomic number exactly double that of oxygen (6)
18. The ..... of an element is decided by how many electrons it has in its outermost energy level (shell) (10)

## Answers

E	A	C	T	I	V	I	T	Y	
<sup>18</sup> R	<sup>13</sup> E	L	E	C	T	R	O	N	I
U	N	V	E	<sup>7</sup> N	I	T	R	O	<sup>14</sup> C
F	I	<sup>6</sup> E	O	<sup>3</sup> N	E	O	<sup>4</sup> N	G	A
L	<sup>12</sup> N	V	R	O	T	O	E	E	L
U	E	I	T	S	<sup>1</sup> I	P	U	<sup>8</sup> N	C
<sup>17</sup> S	G	T	C	E	L	<sup>2</sup> E	T	O	I
L	Y	A	G	E	<sup>5</sup> N	O	R	N	U
A	X	<sup>11</sup> O	W	<sup>10</sup> H	T	G	I	<sup>9</sup> E	<sup>15</sup> M
T	E	<sup>16</sup> M	U	I	S	E	N	G	A