PERIODIC TABLE SOLUTION

1. (c)
Cation is smaller than parent atom while anion is larger than parent atom.

2. (d)
Ionization energy = $\left(2.18\times10^{-18}\right)Z^2\left(\frac{1}{n^2}\right)\times N\,J\,mol^{-1}$ where N is the Avogadro's number.

3. (c)
Electronegativity increases in a period and decreases in a group.
Thus, Si < C, P < N
and Si < P, C < N

4. (d)

5. (d)
Sulphur is a member of 3rd period while O, N and F are members of 2nd period. The atomic radius of sulphur is higher than O, N and F.

6. (a)
Be and N having stable configuration have abnormal values of IE_1.

7. (b)

8. (b)
Atomic radii decreases in a period and increases in a group. Mg and Ca belong to same group while Mg, S and Cl belong to same period.

9. (b) 10. (b)

11. (a, b, c, d)
Follow concepts of bonding.

12. (a, b, c)
Lower is the value of *n* higher is the energy.

13. (a, b, c)
These are facts.

14. (d)
In all biggest jump will be in $_4Be$ as 1s is closest to nucleus.

15. (c)
In O^- and S^-, EA_2 will be +ve because addition of electron is opposed by anionic sphere in each. Also repulsion will be more predominant in O^-.

16. (a)

17. (c)

$$\text{IE Na} = \frac{\text{IE K} + \text{IE Li}}{2}$$

18. (c) 19. (b) 20. (4) 21. (5)