

NOVEMBER/DECEMBER 2019

**BABT22 — PRINCIPLES OF CHEMISTRY  
IN BIOLOGY**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

Each answer not to exceed 50 words.

1. What is Hund's rule?
  2. Define atomic number.
  3. What is electron negativity?
  4. What are earth metals?
  5. Define Molality.
  6. Define Acids and Bases.
  7. What are covalent bond?
  8. Define pH.
  9. What are Antioxidants?
- Define Buffer.



SECTION B — ( $5 \times 5 = 25$  marks)

Answer ALL questions.

Each answer not to exceed 200 words.

11. (a) What are quantum numbers? Explain with example.

Or

- (b) Explain about Pauli's exclusion principle.

12. (a) Write short note on ionization energy of an atom.

Or

- (b) Explain the details of electro negativity and electron affinity with ex.

13. (a) What are acid and bases? Give their Applications.

Or

- (b) Write short note on metal ion indicator.

14. (a) Give an account on covalent bond and Vander Waals interaction with example.

Or

- (b) List out the effect of pH change in biological system with example.

15. (a) Give the effect of Free radical in biological system.

Or

- (b) Write an account on Peroxyl free radical.

SECTION C — ( $3 \times 10 = 30$  marks)

Answer any THREE questions.

Each Answer should not exceed 500 words.

16. Elaborate in detail on Hund's rule and Aufbau principle.

17. What is electronic configuration of an atom? Explain with example.

18. Write a detailed account on neutralization reactions of acid and bases.

19. Write the importance of Blood buffering system.

20. Brief out in detail on the importance of enzymic and nonenzymic antioxidants.

