

NATURE AND SCOPE OF BIOLOGY

1. Serendipity

This is the unexpected or accidental discovery. Examples are the discovery of Penicillin, Law of gravitation, Structure of Benzene, Archimedes principle etc.

2. Prevedic period 4000 – 2500 BC
3. Vedic period 2500 – 650 BC
4. First classification was in Chandhyoga Upanishad
5. Susruta in 600 BC wrote Susruta samhita
6. Thales proposed that life originated in water.
7. Hippocrates is considered as the Father of Medicine.
8. Theophrastus wrote the book “ *Historia plantarum* ” and he is the Father of Botany.
9. Aristotle is the Father of Biology. He wrote the book “ *Historia Animalium* ”.
10. Andreas Vesalius is the Father of Anatomy.
11. William Harvey discovered the blood circulation.
12. The book “ *Micrographica* ” is the contribution of Robert Hook.
13. Francis Reddi conducted the experiment to prove Spontaneous generation of life.
14. N.Grew is the Father of Plant Anatomy.
15. Stephen Hales is the Father of Plant Physiology.
16. George Leopold Cuvier studied fossils.
17. Mayer discovered Photosynthesis.
18. Huxley proposed that Protoplasm is the physical basis of life.
19. W.Khune introduced the term Enzyme.
20. E. Stransburger found out cell division.
21. E.G. Balbiani discovered the larval salivary gland.
22. Godlewski discovered ascend of sap in plants.
23. Beijerinck coined the term Virus.
24. Nawaschin discovered double fertilization in plants.
25. Edward Buchner discovered yeast fermentation.
26. Von-Behring discovered Antitetanus toxin.
27. Sex chromosome was discovered by Mc Clung.
28. Harrison found out Tissue culture technique.
29. J.C.Bose studied plant movements.
30. W.M.Stanley crystallized viruses.
31. Saleman Walkman discovered Streptomycin and introduced the term Antibiotics.
32. H.J.Muller found out the mutagenic property of X-rays.
33. Sexual reproduction in bacteria was found out by Lederberg and Tatum.
34. Emerson and Arnold observed that photosynthesis can be accelerated by flashes of red light.
35. Beadle and Tatum conducted experiments in the Pink bread mould *Neurospora crassa* and found out the role of genes in enzyme synthesis.
36. Archibald Garrod got nobel prize for his work on the Inborn errors of metabolism in man.
37. Operon concept was developed by Jacob and Monod.

38. Khorana shared nobel prize with Robert.w.Holley and Marshal Nirenberg for the synthesis of artificial gene.
39. Stanley Cohen, Herbert Boyer discovered the Recombinant DNA technique.
40. Arber, Smith, Nathans discovered Restriction endonuclease.
41. Mc Clintock Barbara discovered Transposones or Jumping genes in Maize.
42. Ian Wilmut created Dolly in 1996 through animal cloning.

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