

Total Number of Questions : 20

Time : 2 Hours

Max. Marks : 100

1. Differentiate between inductive and deductive methods of scientific inquiry. (3 Marks)
  2. What is muscle twitch ? Explain. (3 Marks)
  3. What are the hormones produced by thyroid gland ? Name the diseases caused by their abnormal production. (3 Marks)
  4. Write notes on different biological databases. (3 Marks)
  5. Write the scientific names of the causative organisms of the following diseases : Typhoid, Cholera, Tetanus, Leprosy, Tuberculosis, Candidiasis. (3 Marks)
  6. What is instinctive behaviour ? (3 Marks)
  7. Write notes on Wildlife Protection Act, 1972. (5 Marks)
  8. Comment on five kingdom classification. Mention merits and demerits. (5 Marks)
  9. Explain hybridoma technology and the production of monoclonal antibodies. (5 Marks)
  10. Write the open-chain structure of monosaccharides : D-Glucose, D-Mannose, D-Fructose, D-Galactose and D-Ribose. (5 Marks)
  11. Explain Hardy-Weinberg equilibrium. (5 Marks)
  12. Write notes on Liebig's law of minimum and Shelford's law of tolerance. (5 Marks)
  13. Briefly explain Wobble hypothesis. (5 Marks)
  14. Write short notes on capacitation and acrosomal reaction. (5 Marks)
  15. Classify Phylum – Echinodermata upto classes. Write the name of the larva of each class. (5 Marks)
  16. Briefly explain Radio Immuno Assay. (5 Marks)
  17. Explain the structure and chemical composition of ribosomes. (8 Marks)
  18. Describe in detail southern blotting technique. (8 Marks)
  19. What is meant by mean deviation and standard deviation ? How will you calculate mean deviation and standard deviation for ungrouped data, grouped data (discrete and continuous series) ? (8 Marks)
  20. Write down the flight adaptations of birds. (8 Marks)
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