



11. Who first described the different structural types of bacteria?
  - a. Robert Koch
  - b. Louis Pasteur
  - c. Alexander Flaming
  - d. Leuwenhoek
12. Sour taste in wine is due to:
  - a. Saccharification
  - b. Sedimentation
  - c. Fermentation
  - d. None of the above
13. Who termed virus as "contagiumvivumfluidum"?
  - a. Louis Pasteur
  - b. Martinus Beijerinck
  - c. Robert Koch
  - d. Leuwenhoek
14. The author of "Philosophia Botanica" was:
  - a. Leuwenhoek
  - b. Linnaeus
  - c. Beijerinck
  - d. Carl Woese
15. Monera consists of:
  - a. Cell wall
  - b. Nucleoid
  - c. Both a and b
  - d. None of the above
16. The first edition of *Bergey's Manual of Systematic Bacteriology* was published in:
  - a. 1923
  - b. 1984
  - c. 1921
  - d. 1992
17. Histone proteins are present in:
  - a. Bacteria
  - b. Plantae
  - c. Animalia
  - d. Both b and c
18. Grape-like cluster is seen in:
  - a. Sarcina
  - b. Streptococci
  - c. Staphylococci
  - d. Tetrad
19. Who is the father of microscopy?
  - a. Leuwenhoek
  - b. Lister
  - c. Beijerinck
  - d. None of the above
20. Sub-Surface colonies are also observed in case of:
  - a. Spread plate techniques
  - b. Streak plate technique
  - c. Pour plate technique
  - d. Both a and b

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**( Descriptive )**

Time : 2 hr. 30 mins.

Marks : 50

[ Answer question no.1 & any four (4) from the rest ]

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|---|----------|
| 1. Who introduced the binomial system of nomenclature? Describe the rules of binomial nomenclature system. Write the demerits of five kingdom classification. | 1+6+3=10 |
| 2. Define fluorescent substances with an example. Describe the principle of fluorescent microscopy with a neat labelled diagram.                              | 2+8=10   |
| 3. Write short notes on:<br>a) Kingdom protista<br>b) Viroids   | 5+5=10   |
| 4. Write short notes on:<br>a) Louis Pasteur<br>b) Robert Koch  | 5+5=10   |
| 5. Briefly describe microbial interactions. With an example explain the Predation.  | 3+7=10   |
| 6. What do you mean by preservation of microbial culture? How we can preserve microorganisms by Cryopreservation and Lyophilisation?                          | 2+8=10   |
| 7. Define rhizosphere effect. How rhizosphere microorganisms help in the growth of a plant? Discuss insect-microbes-plants mutualism.                         | 2+5+3=10 |
| 8. Discuss the physical methods of sterilization.   | 10       |

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