



Date: 29-10-2018  
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

**PART- A**

**Answer the following, each within 50 words only.**

**(10×2=20marks)**

1. What is a Bergey's Manual?
2. Define simple staining.
3. Comment on culture media.
4. What are the various nutritional types in bacteria?
5. What is generalized transduction?
6. Differentiate cyclic and non-cyclic photophosphorylation.
7. What is a plant virus?
8. Comment on virion and viriods.
9. What is vinegar? Mention its uses..
10. What is rhizosphere?

**PART- B**

**Answer the following, each within 500 words. Draw diagrams wherever necessary.**

**(5×7=35 marks)**

11. (a) Explain the six kingdom classification of microbes.  
(or)  
(b) Describe the Gram staining procedure.
12. (a) Write notes on normal growth curve.  
(or)  
(b) Elaborate on the classification of bacteria based on morphology.
13. (a) Give an account on anaerobic fermentation in bacteria.  
(or)  
(b) Explain the steps involved in Kreb's cycle.

14. (a) Discuss the structure of T<sub>4</sub> phage.

(or)

(b) What is a vaccine? Is there any vaccine against HIV.

15. (a) What are secondary metabolites? Add a note on the industrial production of lactic acid.

(or)

(b) Explain nitrogen cycle and its importance.

### **PART- C**

**Answer any three of the following, each within 1200 words. Draw diagrams wherever necessary.**

**(3×15=45 marks)**

16. Enlist the major characteristic features of microorganism.

17. Describe the various physical requirements for bacterial growth.

18. Write notes on any 5 microbial enzymes and their applications.

19. Write notes on: a) lytic cycle b) lysogenic cycle in phages.

20. Explain the various methods in spoilage and preservation of food.

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