

Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore - 641 043

Master Degree Examination - November, 2017
III - Semester

Class: II PG
Time: 3 hours

Major: Botany
Max. Marks: 60

12MBOC13 - Microbiology
Part - A

$10 \times \frac{1}{2} = 5$

Choose the correct answer

1. A cluster of polar flagella is called
a) lophotrichous b) amphitrichous c) monotrichous d) petritrichous
2. Viruses require one of the following types of biological materials for growth.
a) bacteria b) plants c) animals d) living cells
3. Which one of the following bacteria can grow in acidic pH.
a) *Lactobacilli* b) *Vibrio cholerae* c) *Shigella* d) *Salmonella*
4. Gram staining was first developed in the year.
a) 1888 b) 1883 c) 1988 d) 1983
5. The conversion of Nitrogen to ammonia or nitrogenous compound is called as
a) Nitrogen assimilation b) Nitrogen fixation
c) Denitrification d) Nitrification
6. The plants absorb N_2 in the form of
a) Nitrites (NO_2^-) b) Nitrites (NO_3^-)
c) Ammonium (NH_4^+) d) Ammonium (NH_4^+)
7. Microorganisms remove metals by the process
a) Adsorption and complexation b) Adsorption and precipitation
c) Adsorption and voltatilization d) All the above
8. *Chlorella* sp. are widely used in the removal of the item,
a) Organic wastes b) Hydrocarbons c) Heavy metals d) Both a and b
9. Most spoilage bacteria are growing in
a) acidic pH b) alkaline pH c) neutral pH d) natural pH
10. To produce penicillin, main fermentable source in culture is
a) Glucose b) Lactose c) Sulphate d) Sugars

Part – B

5x4=20

Answer ALL questions

Each answer should not exceed 200 words to one page

11. a) Describe the method of photosynthesis in bacteria.
(or)
11. b) Give a concise account on reproduction methods in virus.
12. a) Write short notes on method of physical sterilization.
(or)
- 12.b) Briefly explain the microbial stains.
- 13.a) Enumerate the Leghaemoglobin.
(or)
13. b) What is commensalism? Describe it.
14. a) Describe the method of primary treatment in sewage.
(or)
14. b) Explain the synthetic polymer biodegradation.
- 15.a) Give a concise account on spoilage of food.
(or)
15. b) Briefly explain the single cell protein.

Part – C

5x7=35

Answer ALL questions

Each answer should not exceed 600 words to three pages

16. a) Write an essay on Bergey's system of bacterial classification.
(or)
16. b) Give a detailed account on virus classification.
17. a) Explain the different types of media-preparation for microbial growth.
(or)
- 17.b) Describe the methods of pure culture in microbiology.
- 18.a) Give an account on asymbiotic and symbiotic nitrogen fixation.
(or)
- 18.b) Explain the Ectomycorrhiza and Endomycorrhiza.
- 19.a) Write an essay on sewage treatment and disposal.
(or)
- 19.b) Explain the petroleum oil and pesticide biodegradations.
- 20.a) Describe the methods of alcoholic fermentation.
(or)
- 20.b) Give a detailed account on production methods of Penicillin.
