





**Avinashilingam Institute for Home Science and Higher Education for Women**

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD (now MoE)

Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

**Bachelor's Degree Arrear Examination – May 2025  
I Semester**

**Batch : 2024**  
**Major : Optometry**

**Time: 3 Hours**  
**Max. Marks: 100**

**22BOPC05 Microbiology**

**Course Outcomes:**

CO1: To decode the nature of microorganisms.

CO2: To decipher the pathogenesis of microbes and immunological response by the human body.

CO3: To figure out techniques to control the microbial growth and embrace the aseptic techniques to be followed.

CO4: To unravel the behavior of bacteria and fungi in the human eye.

CO5: To inspect the menaces of virus in human eye.

**Part A**

**10 x 1= 10**

**Choose the Correct Answer**

- |   |               |                 |               |       |
|---|---------------|-----------------|---------------|-------|
| 1. Methanobrevibacter smithii is a                  |               |                 |               |       |
| a. Algae  | b. Fungi      | c. Bacteria     | d. Archaea    | CO1K1 |
| 2. Plasmids are found in                            |               |                 |               |       |
| a. bacteria   | b. yeast      | c. virus        | d. amoeba     | CO1K1 |
| 3. Degree of pathogenicity is called as             |               |                 |               |       |
| a. Virion   | b. Virulence  | c. Viremia      | d. Epidemic   | CO2K1 |
| 4. Cell mediated immunity is facilitated by         |               |                 |               |       |
| a. T cells  | b. NK cell    | c. Ig G         | d. Mast cell  | CO2K1 |
| 5. Autoclave employs temperature of ___ degree      |               |                 |               |       |
| a. 121  | b. 60         | c. 100          | d. 72         | CO3K1 |
| 6. Cold sterilization uses                          |               |                 |               |       |
| a. Steam  | b. Gamma rays | c. X rays       | d. Chemicals  | CO3K1 |
| 7. Cysticercosis is caused by                       |               |                 |               |       |
| a. Taeniasolium                                     | b. Neisseria  | c. Acanthamoeba | d. leprae     | CO4K1 |
| 8. Trachomatis is caused by                         |               |                 |               |       |
| a. Chlamydia  | b. Toxocara   | c. Pseudomonas  | d. Klebsiella | CO4K1 |
| 9. Orbital mucormycosis is a ___ infection          |               |                 |               |       |
| a. fungal   | b. bacterial  | c. viral        | d. algae      | CO5K1 |
| 10. Owl's eye inclusions is seen in _____ infection |               |                 |               |       |
| a. CMV  | b. HIV        | c. Adenovirus   | d. Polio      | CO5K1 |

**Part B**

**5 x 6 = 30**

**Answer ALL questions**

**Each answer should not exceed 400 words or two pages**

11. a. Explain the purpose of Staining with example. CO1K2  
(or)  
11. b. Explain fungal morphology. CO1K2
12. a. Differentiate Humoral and cell mediated immunity. CO2K2  
(or)  
12. b. Discuss stages of Infection. CO2K2
13. a. Explain Disinfection. CO3K2  
(or)  
13. b. Discuss qualities of ideal Antiseptic. CO3K2
14. a. Describe infection caused by Staphylococcus. CO4K3  
(or)  
14. b. Elucidate eye infections caused by Filariasis. CO4K2
15. a. Explain structure of Virus. CO5K2  
(or)  
15. b. Discuss HPV. CO5K3

**Part C**

**5 x 12 = 60**

**Answer ALL questions**

**Each answer should not exceed 800 words or four pages**

16. a. Discuss bacterial structure and its classification. CO1K3  
(or)  
16. b. Discuss the significance of study of Microbiology. CO1K3
17. a. Explain Innate Immunity. CO2K2  
(or)  
17. b. Describe colonization and pathogenesis of Infection. CO2K2
18. a. Discuss sterilization methods. CO3K3  
(or)  
18. b. Discuss techniques and applications of Culture. CO3K2
19. a. Explain Tuberculosis Infection and its complication in Eye. CO4K2  
(or)  
19. b. Discuss eye infection caused by Neisseria. CO4K3
20. a. Elaborate on HIV infection. CO5K2  
(or)  
20. b. Discuss Adenovirus infection. CO5K3

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